



Control Number: 35077



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Project No. 35077

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Fourth Amendment to

INTERCONNECTION AGREEMENT

Between

**Brazos Electric Power Cooperative
and**

LCRA Transmission Services Corporation

Dated

September 12, 2012

329

FOURTH AMENDMENT TO INTERCONNECTION AGREEMENT

This Fourth Amendment ("**Amendment**") is made and entered into this 12th day of September, 2012, between Brazos Electric Power Cooperative ("**Brazos Electric**") and the LCRA Transmission Services Corporation ("**LCRA TSC**"), collectively referred to hereinafter as "**the Parties**".

WHEREAS, the Corporation and Brazos Electric entered into that certain Interconnection Agreement executed May 1, 2007, as amended by that certain Amendment No. 1 executed as of June 2, 2009, amended by that certain Amendment No. 2, executed as of September 15, 2009, amended by that certain Amendment No. 3, executed as of May 18, 2010 (collectively, as amended, the "**Agreement**"); and

WHEREAS, LCRA TSC has replaced two control panels at Marion Substation that were 50% owned by Brazos Electric with two panels owned 100% by LCRA TSC. LCRA TSC is purchasing the remaining reactor bank assets which were 50% owned by Brazos Electric; and

WHEREAS, LCRA TSC will add distribution bay #5, switches and a mobile transformer connection in at Adamsville Substation; and

WHEREAS, LCRA TSC will relocate PT-1 and add switches and a mobile transformer connection in distribution bay #3 at Evant Substation

NOW, THEREFORE, 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 is deleted in its entirety and the Exhibit "A" attached to this Fourth Amendment is hereby added to the Agreement in lieu thereof.
2. Facility Schedule No. 1 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 1 attached to this Fourth Amendment is hereby added to the Agreement in lieu thereof.
3. Facility Schedule No.1 (including the diagrams attached thereto) attached to this Fourth Amendment will become effective upon execution of this Fourth Amendment by the Parties.
4. Facility Schedule No. 2 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 2 attached to this Fourth Amendment is hereby added to the Agreement in lieu thereof.
5. Facility Schedule No.2 (including the diagrams attached thereto) attached to this Fourth Amendment will become effective upon execution of this Fourth Amendment by the Parties.

6. Facility Schedule No. 7 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 7 attached to this Fourth Amendment is hereby added to the Agreement in lieu thereof.
7. Facility Schedule No.7 (including the diagrams attached thereto) attached to this Fourth Amendment will become effective upon execution of this Fourth Amendment by the Parties.
8. Except as otherwise expressly provided for herein, the Agreement will continue in full force and effect in accordance with its terms.

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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.

BRAZOS ELECTRIC POWER
COOPERATIVE

By: Clifton Karnei

Name: Clifton Karnei

BR

DA

Title: Executive Vice President and
General Manager

Date: 9/12/12

LCRA TRANSMISSION SERVICES
CORPORATION

By: Ray Pfefferkorn

Name: Ray Pfefferkorn, P.E.

Title: LCRA Transmission Engineering
Manager

Date: 9/27/12



**Fourth Amendment
EXHIBIT A**

[illegible]

FACILITY SCHEDULE NO. 1

Fourth Amendment

1. **Name:** Adamsville
2. **Facility Location:** The Adamsville Substation is located on FM 1690, 0.9 miles east of US Hwy 281 in Lampasas County, Texas. The Substation is located in the LCRA TSC Lampasas – Goldthwaite 138 kV transmission line, (T-128). The Points of Interconnection at Adamsville Substation are generally described as:
 - where the LCRA TSC jumpers, from the LCRA TSC 12.5 kV operating and transfer buses, connect to Brazos Electric's disconnect switches in bay 4.
 - where the LCRA TSC jumpers, from the LCRA TSC 12.5 kV operating and transfer buses, connects to Brazos Electric's disconnect switches in bay 2.
3. **Transformation Service provided by LCRA TSC (check one):** Yes ☒ No ☐
4. **Metering Service provided by LCRA TSC (check one):** Yes ☒ No ☐
5. **Delivery Voltage:** 12.5 kV
6. **Metering (voltage, location, loss adjustments, if any, due to location, other):** 12.5 kV, at the Adamsville Substation on the load side of the station regulators. Metering CT's are located on the low voltage bus. The metering equipment provided herein will be in accordance with the applicable requirements of the ERCOT Operating Guides, or their successor(s) in function, and the ERCOT Protocols.
7. **Normal Operation of Interconnection (check one):** Open ☐ Closed ☒
8. **One-line Diagram attached (check one):** Yes ☒ No ☐
9. **Description of Facilities owned:**

LCRA TSC owns the Adamsville Substation including, but not limited to the following items:

- LCRA TSC 138 kV transmission line from Adamsville to Lampasas (T-128)
- LCRA TSC 138 kV transmission line from Adamsville to Evant (T-128)
- Two (2) 138 kV motor operated switches 2364 and 2366
- Two (2) 138 kV switches 2368 and 2375
- One (1) 138 kV circuit switcher CS-2315 with bypass switch 2317
- One (1) 138 kV three phase power transformer with surge arresters
- One (1) 25 kV disconnect switch AD-32
- One (1) 12.5 kV totalizing bay 3 including buswork, 12.5 kV hook stick switches
- Three (3) single phase voltage regulators Reg-1
- All structures, foundations, operating and transfer buses for totalizing and distribution

bays.

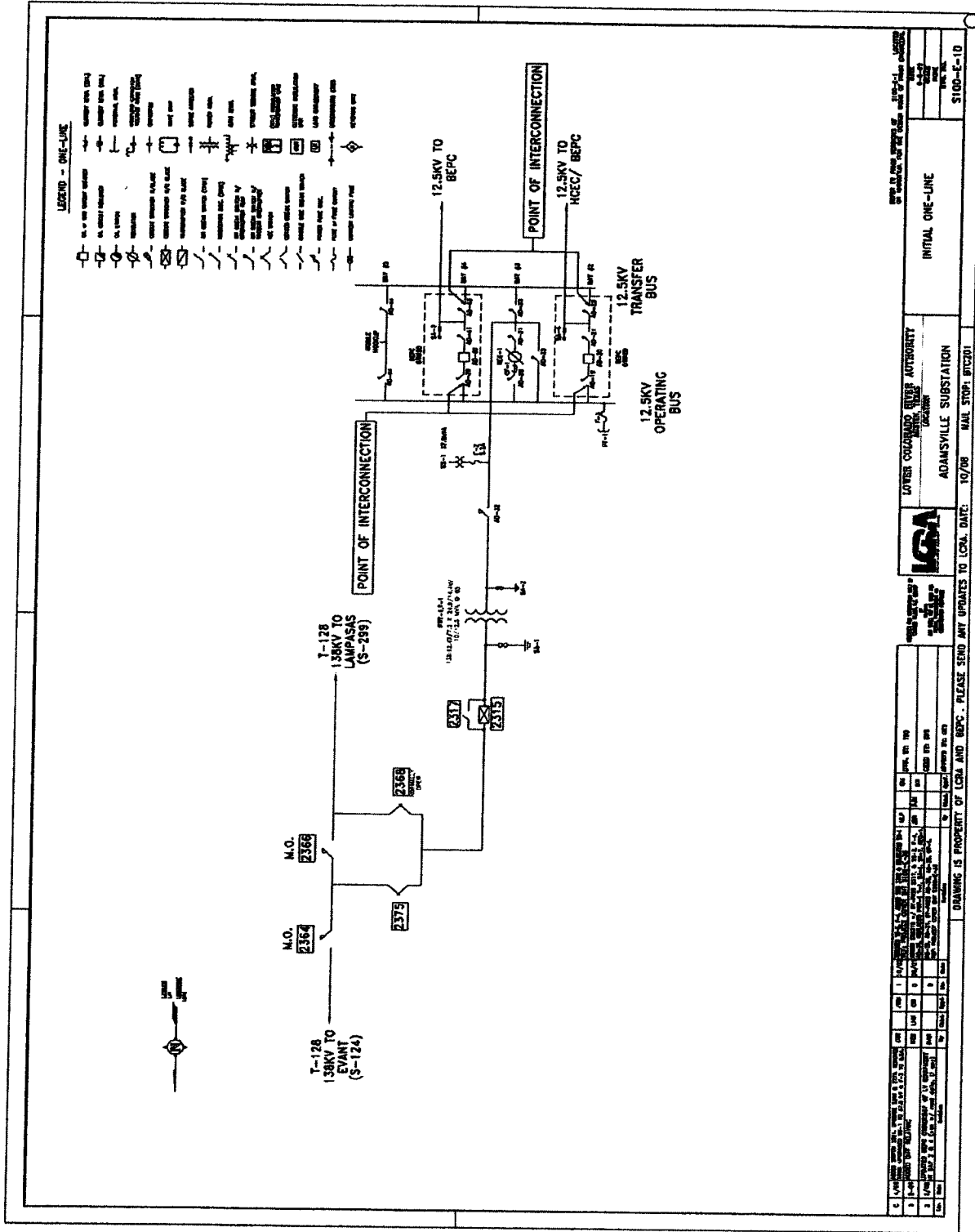
- Switches and mobile connection in distribution bay#5
- One (1) metering current transformer CT-1
- One (1) metering potential transformer PT-1 and fuse F-3
- One (1) station service transformer SS-1 and fuse F-2
- One (1) control / metering house with air conditioner and appurtenances

Brazos Electric owns: (see attached one-line for details)

- Two (2) Breakers, breaker foundations, breaker jumpers, feeder bay switches, surge arresters and feeder buswork in bays 2 and 4

10. **Cost responsibility of each Party:** Each Party will be responsible for costs associated with the facilities they own as identified in item 9 above.
11. **Operation and maintenance responsibility of each Party:** Each Party will be responsible for the operation and maintenance of the facilities it owns. Maintenance of any facilities by either Party that will cause a deviation from normal power and energy flow at the Point of Interconnection will be scheduled at a mutually agreeable time. Brazos Electric shall have access into the substation for the purpose of operating and maintaining Brazos Electric facilities in accordance with this facility schedule. The substation control house and the gate to the substation will be double-locked with the locks of both Parties.
12. **Other Terms and Conditions:** None

Fourth Amendment



FACILITY SCHEDULE NO. 2

Fourth Amendment

1. **Name: Evant**
2. **Facility Location:** The Evant Substation is located west of US Hwy 281 and approximately 24 miles north of Lampasas, Texas in the LCRA TSC Lampasas – Goldthwaite 138 kV transmission line (T-128), near Evant in Lampasas County, Texas. The Points of Interconnection at Evant Substation are generally described as:
 - where the LCRA TSC 12.5 kV operating and transfer buses in bay 6 connect to the Brazos Electric 12.5 kV operating and transfer buses in bay 7.
 - where the LCRA TSC jumpers, from the LCRA TSC 12.5 kV operating and transfer buses, connect to Brazos Electric's disconnect switches in bay 5.
 - where the LCRA TSC jumpers, from the LCRA TSC 12.5 kV operating and transfer buses, connect to Brazos Electric's disconnect switches in bay 6.
3. **Transformation Service provided by LCRA TSC (check one):** Yes ☒ No ☐
4. **Metering Service provided by LCRA TSC (check one):** Yes ☒ No ☐
5. **Delivery Voltage:** 12.5 kV
6. **Metering (voltage, location, loss adjustments, if any, due to location, other):** 12.5 kV, at the Evant Substation which will be located on the load side of the station regulators that feed the 12.5 kV operating bus. The metering equipment provided herein will be in accordance with the applicable requirements of the ERCOT Operating Guides, or its successor in function, and the ERCOT Protocols.
7. **Normal Operation of Interconnection (check one):** Open ☐ Closed ☒
8. **One-Line diagram attached (check one):** Yes ☒ No ☐
9. **Description of Facilities owned by each Party:**

LCRA TSC owns: (see attached one-line for details)

 - Evant substation land
 - LCRA TSC 138 kV transmission line from Evant to Goldthwaite (T-128)
 - LCRA TSC 138 kV transmission line from Evant to Adamsville (T-128)
 - Three 138 kV auto-sectionalizing switches
 - 138 kV fuse F-1 and two power transformer surge arrestors
 - One 138 /13.09 kV 8.4 MVA three phase power transformer
 - 12.5 kV distribution bay 4 including buswork, 12.5 kV hook stick switches and three single phase 333 kVA voltage regulators.
 - Switches and mobile connection in distribution bay 3

- Structures, foundations, operating and transfer buses, for all distribution bays except distribution bay 7.
- Metering current transformers CT-1, CT-2, CT-3 and CT-4
- Metering potential transformer PT-1 and fuse F-3
- Station service transformer SS-1 and fuse F-2
- Control / metering house with air conditioner and appurtenances

Brazos Electric owns: (see attached one-line for details)

- Breakers, breaker foundations, breaker jumpers, feeder bay switches, surge arrestors and feeder buswork in bays 5 and 6.
- 12.5 kV distribution bay 7 including structures, foundations, operating and transfer buses, breaker, switches, and surge arrestors.

- 10. Cost Responsibility of each Party:** Each Party will be responsible for costs associated with the facilities they own as identified in item 9 above.
- 11. Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the facilities it owns. No change will be made in the normal operation of the Points of Interconnection without the mutual agreement of the Parties. Maintenance of any facilities by either Party that will cause a deviation from normal power and energy flow at the Points of Interconnection will be scheduled at a mutually agreeable time. Brazos Electric shall have access into the substation for the purpose of operating and maintaining Brazos Electric facilities in accordance with this facility schedule. The substation control house and the gate to the substation will be double-locked with the locks of both Parties.
- 12. Maintenance Responsibilities of Each Party:** Each Party will be responsible for the maintenance of the facilities it owns.
- 13. Other Terms and Conditions:** None

[illegible]

FACILITY SCHEDULE NO. 7
Fourth Amendment

1. **Name: Marion**
2. **Facility Location:** Marion Substation is located in Guadalupe County, 5.9 miles southwest of New Braunfels, TX, and approximately 10 miles south of the intersection of CR 359 and CR 374, on the east side of CR 359. The Points of Interconnection at Marion Substation are generally described as:
 - where LCRA TSC's 345 kV bus #1 connects to Brazos Electric's 345 kV bus going to Brazos Electric's switch # 7059. This point is approximately 44 feet from the center of the connection of LCRA TSC's 345 kV bus #1 to the LCRA TSC 345 kV bus running between the bays for the Zorn and CPS Skyline Transmission Lines.
 - where LCRA TSC's 345 kV bus #2 connects to Brazos Electric's 345 kV bus going to Brazos Electric's switch # 7039. This point is approximately 50 feet from the center of the connection of LCRA TSC's 345 kV bus #2 to the LCRA TSC 345 kV bus running between the bays for the Zorn and CPS Skyline Transmission Lines.
3. **Transformation Service provided by LCRA TSC (check one):** Yes___ No X
4. **Metering Service provided by LCRA TSC (check one):** Yes___ No X
5. **Delivery Voltage:** 345 kV
6. **Metering (voltage, location, loss adjustments, if any, due to location, other :**
Metering will be accomplished by using 345 kV potential and current transformers in the substation. The metering equipment provided herein will be in accordance with the applicable requirements of the ERCOT Operating Guides, or its successor in function, and the ERCOT Protocols.
7. **Normal Operation of Interconnection (check one):** Open ___ Closed X
8. **One-line Diagram attached (check one):** Yes X No___
9. **Description of Facilities owned by Each Party:**
LCRA TSC owns: (see attached one-line for details);
 - Necessary structures, hardware, buswork, conduit, cable, foundations, earthwork, grounding, and fencing for the substation.
 - Property to accommodate the substation facilities.
 - All 345 kV breakers, disconnect switches, surge arrestors, PTs, CTs and buswork up to the Point of Interconnection with Brazos Electric.
 - Metering equipment, telemetry equipment, RTU, and associated communication

facilities between the substation and LCRA TSC's control center, including SCADA and associated communication equipment to monitor and control facilities in the substation from LCRA TSC's control center.

- One autotransformer T-2
- One 120 kV surge arrestor
- One 15 kV surge arrestor
- Three reactor surge arrestor kits
- Three disconnect switches 10819, 10829, 10839.
- Two (2) breaker control panels **panel 2 and panel 3.
- Three 25kV circuit breakers 10820, 10830 and 10840
- 75 MVAR, 13.2 kV reactors R-1, R-2 and R-3
- Three 23 kV potential transformers
- One disconnect switch 339
- Circuit breaker 340
- Ground bank GB-1.

**In 2010 LCRA removed breaker control panels 3 and 4 which controlled circuit breakers 340, 10820, 10830, and 10840. Panels 3 and 4 were 50% owned by Brazos Electric and 50% owned by LCRA TSC. LCRA TSC installed, at LCRA TSC expense, replacement panels 2 and 3 making LCRA TSC 100% owner of the replacement panels.

Brazos Electric owns: (see attached one-line for details);

- Double-Circuit 345 kV Marion to Elm Creek transmission line ("Transmission Line"), conductors, static wire, dead-end structures, and facilities necessary to terminate the Transmission Line on the dead-end structures.
- Three 345 kV, 3000 A, circuit breakers (#7040, #7050, #7060) and protective relaying.
- Six 345 kV, 2000 A, disconnect switches associated with the 345 kV breakers
- Two 345 kV surge arrestors SA#12 and SA#13
- Two CCVT's
- Necessary structures, hardware, buswork, conduit, cable, grounding, and foundations in the substation for Brazos Electric equipment listed above.
- Telemetry equipment, RTU, and associated communication facilities between the substation and Brazos Electric's control center in Waco, TX, including SCADA and associated communication equipment to monitor and control facilities in the substation from Brazos Electric's control center.

10. **Cost Responsibility of each Party:** Each Party will be responsible for costs associated with the facilities they own as identified in item 9 above.
11. **Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the facilities it owns. No change will be made in the normal operation of the Point of Interconnection without the mutual agreement of the Parties. Maintenance of any facilities by either Party that will cause a deviation from normal power and energy

flow at the Point of Interconnection will be scheduled at a mutually agreeable time. Brazos Electric shall have access into the substation for the purpose of operating and maintaining Brazos Electric facilities in accordance with this facility schedule. The substation control house and the gate to the substation will be double-locked with the locks of both Parties.

12. **Maintenance Responsibilities of Each Party:** Each Party will be responsible for the maintenance of the facilities it owns.
13. **Other Terms and Conditions:** None

MARION ONE LINE DIAGRAM

Fourth Amendment

