



Control Number: 35077



Item Number: 810

Addendum StartPage: 0

**Project No. 35077**

2018 APR 16 PM 3:01

**Amendment No. 8**

**INTERCONNECTION AGREEMENT**

**Between**

**LCRA Transmission Services Corporation**

**and**

**New Braunfels Utilities**

**March 22, 2018**

**EIGHTH AMENDMENT TO  
INTERCONNECTION AGREEMENT**

This Eighth Amendment to Interconnection Agreement ("Eighth Amendment") is made and entered into this 22<sup>nd</sup> day of MARCH, 2018, between New Braunfels Utilities ("NBU"), a municipally owned utility and LCRA Transmission Services Corporation ("LCRA TSC") collectively referred to hereinafter as the Parties.

**WHEREAS**, LCRA TSC and NBU entered into that certain Interconnection Agreement executed July 22, 2009, as amended by that certain Amendment No. 1, executed as of December 16, 2009, as amended by that certain Amendment No. 2, executed as of January 17, 2011, as amended by that certain Amendment No. 3, executed as of January 8, 2014, as amended by that certain Amendment No. 4, executed as of September 17, 2014, as amended by that certain Amendment No. 5, executed as of June 3, 2015, as amended by that certain Amendment No. 6, executed as of May 23, 2017, as amended by that certain Amendment No. 7, executed as of October 11, 2017 (collectively, as amended, the "Agreement");

**WHEREAS**, changes were made at Freiheit Road Substation during the installation and after Amendment No 7 was executed;

**WHEREAS**, this amendment to the Interconnection Agreement is necessary because

- the Parties desire to add a new Point of Interconnection at the new Weltner Road Substation; and
- changes were made at Freiheit Road Substation after Amendment 7 was executed; and

**WHEREAS**, CT1, CT2, CT3 and CT4 external current transformers were removed and replaced with internal transformers at Freiheit Road Substation; and

**WHEREAS**, NBU will install NBU's portion of the Weltner Road Substation and LCRA TSC will install LCRA TSC's portion of the Weltner Road Substation providing 138-kV to NBU.

**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" Amendment No. 7, attached to the Agreement, is deleted in its entirety and Exhibit "A" Amendment No. 8, attached to this Eighth Amendment, is substituted as Exhibit A of the Agreement as of the effective date of this Eighth Amendment.
2. Facility Schedule No. 2 (including the diagrams attached thereto), attached to the Seventh Amendment, is deleted in its entirety and Facility Schedule No. 2, attached to this Eighth Amendment, is hereby added to the Agreement in lieu thereof.
3. Facility Schedule No. 2 (including the diagrams attached thereto), attached to this Eighth

4. Facility Schedule No. 9 (including the diagrams attached thereto) is hereby added to the Agreement.

5. Facility Schedule No. 9 (including the diagrams attached thereto), attached to this Eighth Amendment, will become effective upon execution of this Eighth Amendment by the Parties.

6. The changes described in this Eighth Amendment, and the diagrams attached thereto, will become effective upon execution of this Eighth Amendment.

Except as otherwise expressly provided in this Eighth Amendment, all the terms and conditions of the Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the Parties, acting through their authorized representatives, have executed this Eighth Amendment in two counterparts, each of which shall be deemed an original but shall constitute one and the same instrument.

NEW BRAUNFELS UTILITIES

By: LT

Name: Ian Taylor

Title: Chief Executive Officer

Date: 3/22/2018

LCRA TRANSMISSION SERVICES  
CORPORATION

By: [Signature]

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission  
Design and Protection

Date: 02/05/2018



**EXHIBIT A**  
**Amendment No 8**

<b>FACILITY SCHEDULE NO.</b>	<b>LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)</b>	<b>INTERCONNECTION VOLTAGE (KV)</b>	<b>EFFECTIVE DATE OF INTERCONNECTION</b>
1	Comal (6)	138-kV	June 3, 2015
2	Freiheit Road (3)	138-kV	Date of 8 <sup>th</sup> Amendment
3	Henne (6)	138-kV	May 23, 2017
4	Highway 46 (2)	138-kV	January 8, 2014
5	Hortontown (3)	138-kV	July 22, 2009
6	Sheriff's Posse (1)	138-kV	October 11, 2017
7	Marion (2)	138-kV	October 11, 2017
8	EC Mornhinweg (1)	138-kV	September 17, 2014
9	Weltner (1)	138-kV	Date of 8 <sup>th</sup> Amendment
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## **FACILITY SCHEDULE NO. 2**

### **Amendment 8**

1. **Name:** Freiheit Road Substation
2. **Facility Location:** The Freiheit Road Substation is located at 1463 FM 1101, New Braunfels, Comal County, Texas 78130.
3. **Points of Interconnection:** There are three (3) Points of Interconnection in the Freiheit Road Substation generally described as:
  - where the 138 kV Transformer Bus 3 terminal connector bolts to the four hole pad on switch 3534.
  - where the 138 kV Transformer Bus 1 terminal connector bolts to the four hole pad on switch 3514.
  - where the 138 kV Transformer Bus 2 terminal connector bolts to the four hole pad on switch 3554.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Services Agreement between the Parties.
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located internal to FRT1, FRS2 and FRS3. The bus potential transformers are located on the 12.5 kV operating buses for FRT1, FRT2 and FRT3.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

NBU owns:

The Freiheit Road Substation including, but not limited to the following items:

- Four (4) 138 kV transformer bus bays with 4 a-frames, upper and lower trusses and foundations
- Three (3) circuit switchers CS3515, CS3525 and CS3545; associated disconnect switches 3514, 3534, and 3554 ; bypass switches 3517, 3547 and 3557
- One (1) 138 kV slipover bus diff current transformer CT5
- Three (3) 12.5 kV metering current transformers internal to FRT1, FRS2 and FRS3
- Three (3) power transformers FRT1, FRT2 and FRT3 with associated surge arresters, foundations, jumpers and protective relaying
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware

- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, bus tie switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformers and associated cabling
- Three (3) station service SS1, SS2 and SS3 with associated fuses F1, F3 and F5
- One (1) control house (20' X 24') with batteries, battery charger and appurtenances
- Underfrequency relay equipment
- Substation property, ground grid, gravel, fencing and other appurtenances

**LCRA TSC owns:**

- Five (5) 138 kV bays identified as NBU bay #4 and LCRA TSC bays 2,3,4 and 5
- Five (5) 138 kV A-frame structures, upper and lower trusses, foundations, insulators and jumpers (NBU bay #4 and LCRA TSC bays 2,3,4 and 5)
- Five (5) 138 kV circuit breakers in a ring bus configuration 27780, 27790, 27800, 27810 and 27820 with foundations, jumpers and protective relaying
- Ten (10) 138 kV switches 27779, 27781, 27789, 27791, 27799, 27801, 27809, 27811, 27819 and 27821
- Two (2) 138 kV coupling capacitor voltage transformers CCVT2 and CCVT3
- Two (2) 138 kV surge arresters SA23 and SA24
- Three (3) 138 kV transformer bus differential and breaker failure relaying schemes BD1, BD2 and BD3
- Three (3) 138 kV transformer buses including structures, insulators, foundations and jumpers
- Three (3) metering packages
- One (1) control house (24' X 39') with batteries, battery charger and appurtenances

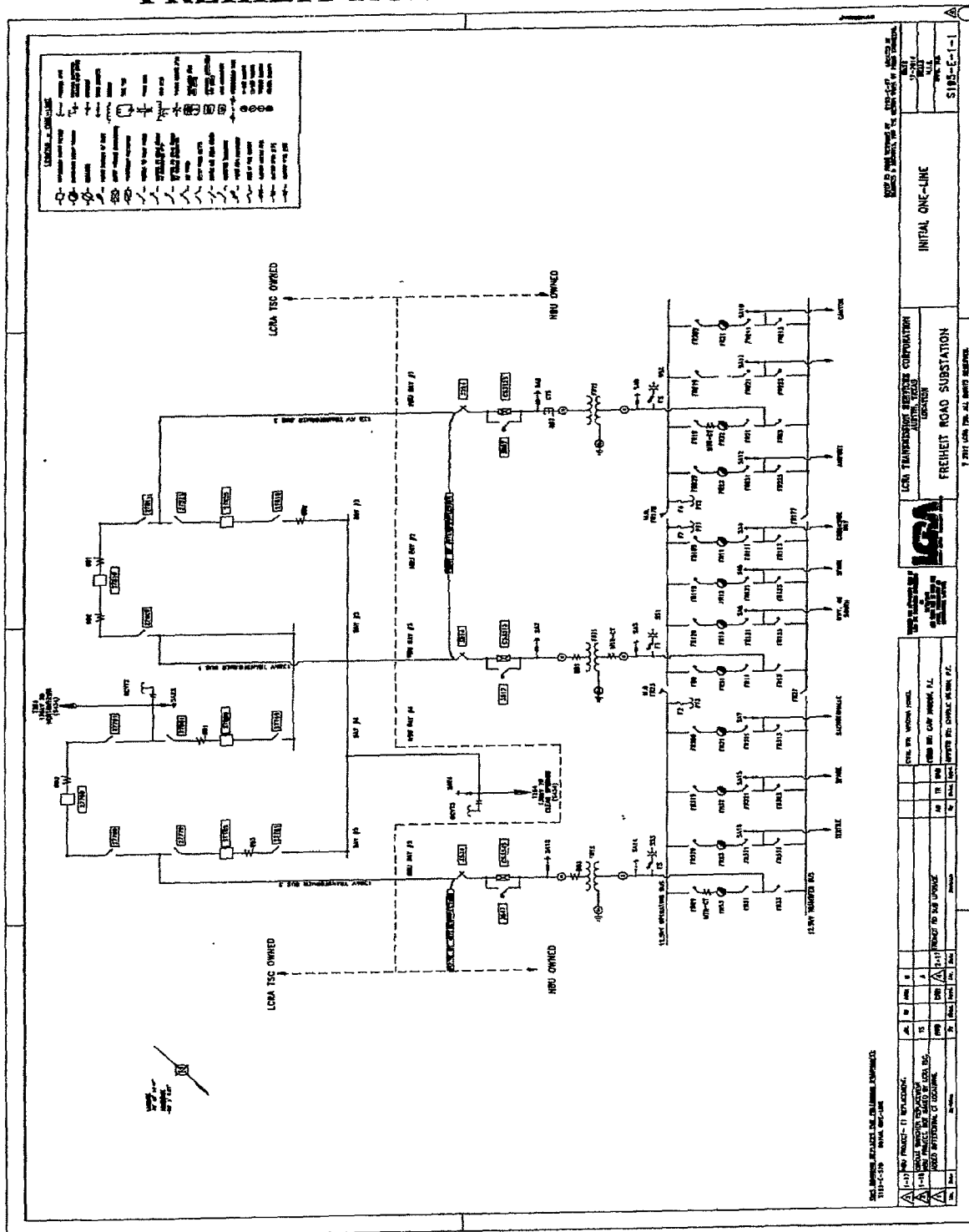
- 10. Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:**
  - NBU and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate, or by future technology to be determined by NBU in coordination with LCRA TSC.
  - NBU will share access to the NBU Freiheit Road control house. Access is obtained by contacting NBU's System Operations Control Center
  - LCRA TSC will share access to the LCRA TSC Freiheit Road control house. Access is obtained by calling LCRA TSC's System Operations Control Center using the intercom at the door of the control house.

- NBU will supply and allow LCRA TSC use of its 12.5 kV bus potential transformers PT1, PT2 and PT3 for LCRA TSC's metering.
- NBU will supply and allow LCRA TSC use of its 12.5 kV metering current transformers internal to FRT1, FRS2 and FRS3 for LCRA TSC's metering.
- NBU will supply and allow LCRA TSC use of transformer FRT3 and FRT1 relaying current transformers for use in LCRA TSC's 138 kV BD3 and BD1 transformer bus differential relaying schemes.
- NBU will supply and allow LCRA TSC use of relaying current transformer CT5 for use in LCRA TSC's 138 kV BD2 transformer bus differential relaying scheme.
- NBU will provide breaker failure initiate contacts from its circuit switchers CS3545, CS3515 and CS3525 relaying panels to LCRA TSC's 138 kV BD3, BD1 and BD2 bus differential & breaker failure relaying panels.
- LCRA TSC will provide tripping and close inhibit contacts from its 138 kV BD3, BD1 and BD2 transformer bus differential & breaker failure relaying panels to NBU's circuit switcher CS3545, CS3515 and CS3525 relaying panels.
- NBU will supply and allow LCRA TSC use of any of its station service SS1, SS2 or SS3 for LCRA TSC's primary and backup station service to LCRA TSC's control house. Station Service may be used for purposes directly relating to substation Operation, Maintenance, and Capital Upgrades.
- LCRA TSC and NBU shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.

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## **FACILITY SCHEDULE NO. 9**

1. **Name:** Weltner Road Substation
2. **Facility Location:** The Weltner Road Substation is located on the northwest side of Weltner Road under LCRA TSC's transmission line T264, New Braunfels, Comal County, Texas 78130.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Weltner Road Substation generally described as:
  - where the jumper from LCRA TSC's 138-kV bus attaches to NBU's 138-kV transformer bus at the share substation boundary
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Services Agreement between the Parties
6. **Delivery Voltage:** 138-kV
7. **Metered Voltage and Location:** The metering voltage is 12.5-kV. The metering current transformer is located inside WRTI. The bus potential transformer is located on the 12.5-kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

NBU owns:

The Weltner Road Substation (NBU yard) including, but not limited to, the following items:

- One (1) 138-kV transformer bus from circuit switcher disconnect switch 27344 to the Point of Interconnection at the shared substation boundary
- One (1) 138-kV mobile transformer bus from the mobile transformer switch to the shared substation boundary
- One (1) 138-kV mobile transformer switch
- One (1) circuit switcher CS27345 with associated disconnect switch 27344 and bypass switch 27347
- One (1) power transformer WRTI with associated surge arresters, foundation, jumpers and protective relaying
- One (1) transformer bus tower including foundations, insulators and jumpers
- All distribution circuits including dead-end insulators that attach to the dead-end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations

- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5-kV operating and transfer bus, bus potential transformer, and associated cabling
- One (1) control house (24' x 40'), battery bank, battery charger and appurtenances
- One (1) station service SS1 with fused disconnect
- Substation NBU yard property ground grid, gravel, fencing and other appurtenances

**LCRA TSC owns:**

The Weltner Road Substation (LCRA TSC yard) including, but not limited to, the following items:

- Two (2) 138-kV dead-end structure, foundation, insulators and jumpers
- Two (2) 138-kV motor operated switches MO27341 and MO27351
- One (1) 138-kV disconnect switch 27361
- One (1) 138-kV surge arrester SA1
- One (1) 138-kV power voltage transformer PVT1
- One (1) jumper from LCRA TSC 138-kV bus to Point of Interconnection at NBU's 138-kV transformer bus located at the shared substation boundary
- One (1) jumper from LCRA TSC 138-kV bus to NBU 138-kV mobile transformer bus
- One (1) meter panel with meters
- One (1) interface junction box at the share substation boundary
- One (1) control house (21' x 27'), battery bank, battery charger and appurtenances
- Substation LCRA TSC yard property, ground grid, gravel, fencing and other appurtenances

10. **Operational Responsibilities of Each Party:** Each Party will be responsible for the operation of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:**
  - LCRA TSC will share access to the Weltner Road Substation (LCRA TSC yard) by allowing NBU to place a hardened lock in series with LCRA TSC's lock in the chain securing the gate.
  - NBU will share access to the Weltner Road Substation (NBU yard) by allowing LCRA TSC to place hardened locks in series with NBU's locks in the gate and control house door.
  - LCRA TSC will share access to the Weltner Road Substation (LCRA TSC yard) control house. Access is obtained by calling LCRA TSC's System Operations Control Center using the intercom at the door of the control house.
  - NBU will supply and allow LCRA TSC use of its 12.5-kV bus potential transformer PT1 for metering.
  - NBU will supply and allow LCRA TSC use of transformer WRT1's metering

current transformer for LCRA TSC's metering.

- NBU will provide trenching, cable and conduits from its facilities to the interface junction box located at the shared substation boundary in the LCRA TSC yard for wiring needed to interface the two systems.
- LCRA TSC will supply and install the interface junction box and will provide trenching, cable and conduits from its facilities to the interface junction box for wiring needed to interface the two systems.
- NBU and LCRA TSC ground grids will be installed by each Party but will be connected together at the shared substation boundary.
- NBU and LCRA TSC shield wire systems will be installed by each Party and will not be connected together, but will be designed in such a way to adequately protect all buswork.
- NBU will allow LCRA TSC to use NBU's station service SS1 for backup power in LCRA TSC's control house. LCRA TSC will engineer and provide the appropriate cable and conduit for the station service cable installation. NBU will provide trenching and installation from the station service disconnect to the shared substation boundary. LCRA TSC will supply trenching and installation from the shared substation boundary to LCRA TSC's control house.
- LCRA TSC will allow NBU to use PVT1 for backup power in NBU's control house. NBU will engineer and provide the appropriate cable and conduit for the backup service cable installation. LCRA TSC will provide trenching and installation from the PVT1 disconnect to the shared substation boundary. NBU will supply trenching and installation from the shared substation boundary to NBU's control house.
- Weltner Road Substation (LCRA TSC yard) substation access and physical security will be in accordance with LCRA TSC standards.

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# WELTNER ONE-LINE DIAGRAM

