



Control Number: 35077



Item Number: 747

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Project No. 35077

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Amendment No. 12

INTERCONNECTION AGREEMENT

Between

LCRA Transmission Services Corporation

and

Guadalupe Valley Electric Cooperative, Inc.

June 29, 2017

747

TWELFTH AMENDMENT TO INTERCONNECTION AGREEMENT

This Twelfth Amendment ("Amendment") is made and entered into this 29 day of June, 2017 between the Guadalupe Valley Electric Cooperative, Inc. ("GVEC") and LCRA Transmission Services Corporation ("LCRA TSC") collectively referred to hereinafter as the Parties.

WHEREAS, LCRA TSC and GVEC entered into that certain Interconnect Agreement executed February 8, 2011; as amended by that certain Amendment No. 1, executed as of August 26, 2011; as amended by that certain Amendment No. 2, executed as of October 13, 2011; as amended by that certain Amendment No. 3, executed as of November 30, 2011; as amended by that certain Amendment No. 4, executed as of December 19, 2011, as amended by that certain Amendment No. 5, executed as of February 16, 2012, as amended by that certain Amendment No. 6, executed as of April 25, 2013, as amended by that certain Amendment No. 7, executed as of July 29, 2013, as amended by that certain Amendment No. 8, executed as of December 19, 2014, as amended by that certain Amendment No. 9, executed as of February 23, 2015, as amended by that certain Amendment No. 10, executed as of October 20, 2016, as amended by that certain Amendment No. 11, executed as of March 10, 2017 (collectively, as amended, the "Agreement");

WHEREAS, LCRA TSC installed two (2) 12.5 kV mobile transformer connection points, replaced the capacitor bank circuit switcher with a circuit breaker, removed a capacitor bank current transformer and removed the out of operation UFLS panel at the Cuero Substation;

WHEREAS, GVEC and LCRA were parties, along with NBU to the Marion Project Agreement dated May 12, 1978 which provided for coordinated development of a transmission system in the Marion area; LCRA TSC was assigned LCRA's interest in the Marion Project Agreement during the establishment of LCRA TSC on January 1, 2002; and for GVEC the termination of the Marion Project Agreement coincided with the GVEC termination of the LCRA wholesale power agreement in June 2016;

WHEREAS, to benefit future development at Marion Substation, LCRA TSC has purchased both Marion 138 kV operating buses and the original control house previously owned through shared ownership by GVEC and NBU; and LCRA TSC has purchased from GVEC the GVEC unused 138 kV line bay previously known as the future Schumansville line bay;

WHEREAS, at Marion Substation LCRA TSC will provide a new control house along with relocation of four (4) existing GVEC panels from the original control house to the new control house and extend both 138 kV operating buses in coordination with GVEC installing a power transformer with distribution facilities and a 138 kV connection to LCRA TSC's 138 kV buses via two (2) new circuit breakers;

WHEREAS, LCRA TSC will relocate metering CT's and remove a meter panel at Schumansville Substation; and,

WHEREAS, LCRA TSC will improve the power transformer reliability at Yoakum

Gartner Substation by replacing circuit switcher CS4325, replacing 138 kV insulators and reconfiguring the 138 kV switches.

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" is deleted in its entirety and the Exhibit "A" attached to this Twelfth 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 Twelfth Amendment is hereby added to the Agreement in lieu thereof.
3. Facility Schedule No. 1 (including the diagrams attached thereto) attached to this Twelfth Amendment will become effective upon execution of this Twelfth Amendment by the Parties.
4. Facility Schedule No. 6 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 6 attached to this Twelfth Amendment is hereby added to the Agreement in lieu thereof.
5. Facility Schedule No. 6 (including the diagrams attached thereto) attached to this Twelfth Amendment will become effective upon execution of this Twelfth Amendment by the Parties.
6. Facility Schedule No. 9 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 9 attached to this Twelfth Amendment is hereby added to the Agreement in lieu thereof.
7. Facility Schedule No. 9 (including the diagrams attached thereto) attached to this Twelfth Amendment will become effective upon execution of this Twelfth Amendment by the Parties.
8. Facility Schedule No. 16 (including the diagrams attached thereto) is deleted in its entirety and Facility Schedule No. 16 attached to this Twelfth Amendment is hereby added to the Agreement in lieu thereof.
9. Facility Schedule No. 16 (including the diagrams attached thereto) attached to this Twelfth Amendment will become effective upon execution of this Twelfth 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 Twelfth Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

GUADALUPE VALLEY ELECTRIC
COOPERATIVE, INC.

By: _____

Name: Sean Alvarez

Title: Chief Operating Officer and
Senior Executive, Engineering and Operations

Date: JUNE 29, 2017

LCRA TRANSMISSION SERVICES
CORPORATION

By: _____

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission
Design and Protection

Date: JUNE 09, 2017



Exhibit A
Amendment No. 12

| FACILITY SCHEDULE NO. | LOCATION OF POINT(S) OF INTERCONNECTION (# of Points) | INTERCONNECTION VOLTAGE (KV) | EFFECTIVE DATE OF INTERCONNECTION |
|--------------------------------------|--|---|--|
| 1 | Cuero (18) | 12.5 kV | Date of 12 th Amendment |
| 2 | Geronimo (4) | 138 kV | 7/29/2013 |
| 3 | Gonzales (2) | 138 kV | 2/8/2011 |
| 4 | Hallettsville (2) | 138 kV | 12/19/2014 |
| 5 | FM 237 Yorktown (1) | 138 kV | 12/19/2014 |
| 6 | Marion (4) | 138 kV | Date of 12 th Amendment |
| 7 | LCRA Nixon (13) | 69 kV /138 kV | 3/10/2017 |
| 8 | Parkway (6) | 138 kV | 2/8/2011 |
| 9 | Schumansville (1) | 138 kV | Date of 12 th Amendment |
| 10 | Seguin (6) | 138 kV | 2/23/2015 |
| 11 | Seguin West (6) | 138 kV | 3/10/2017 |
| 12 | Sweet Home (6) | 24.9 kV | 2/8/2011 |
| 13 | Thompsonville (3) | 4.16 kV | 2/8/2011 |
| 14 | Waelder (6) | 12.5 kV | 2/8/2011 |
| 15 | Weiderstein (2) | 138 kV | 2/8/2011 |
| 16 | Yoakum-Gartner (11) | 12.5 kV | Date of 12 th Amendment |
| 17 | York Creek (1) | 138 kV | 2/8/2011 |
| 18 | Cheapside (2) | 138 kV | 2/8/2011 |
| 19 | Pilot Grove (3) | 138 kV | 2/23/2015 |
| 20 | Nordheim West (1) | 138 kV | 12/19/2014 |
| 21 | Lost Creek (2) | 138 kV | 12/19/2014 |
| 22 | Mont (1) | 138 kV | 2/16/2012 |
| 23 | Lindenau (1) | 138 kV | 2/16/2012 |
| 24 | Highway 123 (4) | 138 kV | 3/10/2017 |
| 25 | Gillett (1) | 138 kV | 3/10/2017 |
| 26 | Deer Creek (2) | 69 kV/138 kV | 3/10/2017 |
| 27 | Shiner (3) | 12.5 kV | 2/23/2015 |
| 28 | Moulton South (1) | 138 kV | 10/20/2016 |
| 29 | | | |
| 30 | | | |
| 31 | | | |
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| 35 | | | |

FACILITY SCHEDULE NO. 1

Amendment No 12

1. **Name:** Cuero Substation
2. **Facility Location:** The Cuero Substation is located at 1022 E. FM 1447, Cuero, Dewitt County, Texas 77954.
3. **Points of Interconnection:** There are eighteen (18) Points of Interconnection in the Cuero Substation generally described as:
 - where the incoming distribution line connects to the tubular bus between switches CU311 and CU313 at breaker CU101.
 - where the jumper from breaker CU101 connects to the 4 hole pad on switch CU309.
 - where the jumper from breaker CU101 connects to the 4 hole pad on switch CU311.
 - where the incoming distribution line connects to the tubular bus between switches CU321 and CU323 at breaker CU201.
 - where the jumper from breaker CU201 connects to the 4 hole pad on switch CU319.
 - where the jumper from breaker CU201 connects to the 4 hole pad on switch CU321.
 - where the incoming distribution line connects to the tubular bus between switches CU341 and CU343 at breaker CU401.
 - where the jumper from breaker CU401 connects to the 4 hole pad on switch CU339.
 - where the jumper from breaker CU401 connects to the 4 hole pad on switch CU341.
 - where the incoming distribution line connects to the tubular bus between switches CU351 and CU353 at breaker CU501.
 - where the jumper from breaker CU501 connects to the 4 hole pad on switch CU349.
 - where the jumper from breaker CU501 connects to the 4 hole pad on switch CU351.
 - where the incoming distribution line connects to the tubular bus between switches CU361 and CU363 at breaker CU601.
 - where the jumper from breaker CU601 connects to the 4 hole pad on switch CU359.
 - where the jumper from breaker CU601 connects to the 4 hole pad on switch CU361.
 - where the incoming distribution line connects to the tubular bus between switches CU371 and CU373 at breaker CU701.
 - where the jumper from breaker CU701 connects to the 4 hole pad on switch CU369.
 - where the jumper from breaker CU701 connects to the 4 hole pad on switch CU371.
4. **Transformation Services Provided by LCRA TSC:** Yes, per Transformation Service Agreement
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Service Agreement
6. **Delivery Voltage:** 12.5 kV

7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located inside T4 and in the 12.5 kV tie bay 1-1 (CT13). 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:**

GVEC owns:

- Six (6) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- Six (6) distribution circuit breakers CU101, CU201, CU401, CU501, CU601 and CU701 including jumpers and protective relaying
- Four (4) distribution circuit breaker foundations in bays 3-1, 3-2, 3-4 and 3-5
- One (1) load management system LM with fuse F6
- One (1) resource management system RM with fuse F10
- One (1) modulation transformer MTU1 with fuses F12 and F13
- Communications equipment on LCRA TSC communications tower

LCRA TSC owns:

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

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV operating bus #1 and transfer bus #1 and #2 including structures, insulators, foundations and jumpers
- Two (2) power transformers T1 and T4 with associated surge arresters, foundations and protective relaying
- Two (2) single phase current transformers CT21 and CT10
- One (1) relaying current transformer CT23
- Two (2) circuit switchers CS4255 and CS4285 with associated bypass switches 4258 and 4288
- Five (5) 138 kV switches 4254, 4257, 4276, 4284 and 4287
- One (1) 138 kV circuit breaker 4270 with foundation, jumpers and protective relaying
- One (1) capacitor bank CP1
- One (1) capacitor bank potential transformer PT4
- All T4 distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus and bus potential transformer
- One (1) total circuit breaker CU380 including foundation, jumpers and protective relaying
- Two (2) distribution circuit breaker foundations in bays # 3-6 and # 3-7
- All T1 distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformer, metering current transformers and associated cabling
- One (1) total circuit breaker CU130 with jumpers, protective relaying and

foundation

- One (1) bus tie circuit breaker CU110 including foundation, jumpers and protective relaying
- Two (2) 12.5kV mobile transformer connection points
- Two (2) meter panels (1 for GVEC metering)
- Relay, RTU and SIP panels
- Two (2) station service SS1 with fuse F3 and SS4 with fuse F11
- One (1) control house (24' x 40') with batteries and battery charger
- Substation property, ground grid, gravel, fencing and other appurtenances.

10. Operational Responsibilities of Each Party: Each Party is 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:

- GVEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.
- LCRA TSC will provide GVEC access to 125 VDC and 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either LCRA TSC (if space is available) or GVEC.
- LCRA TSC will provide GVEC with floor space (as available and as necessary) in its control house for the installation of GVEC required relay panel boards and equipment.
- LCRA TSC and GVEC shall design, provide, and coordinate their respective protection system equipment so that adjacent zones of protection overlap, in accordance with ERCOT Nodal Operating Guides.
- GVEC is permitted to install, operate and maintain, a Microwave Link (MW)-consisting of a Motorola PTP 400 Bridge along with the associated hardware and electronics at approximately 80 foot elevation on the existing LCRA TSC 103' Tower at the Northeast corner of the control house, operating in the RF band of 5.470 GHz-5.725 GHz, under the following conditions:
 - a. GVEC's final MW design is reviewed and approved by LCRA TSC prior to installation.
 - b. GVEC's installation does not interfere with LCRA TSC operations.
 - c. GVEC's installation is for the sole purpose of electric utility operations associated with the substation and GVEC's distribution equipment.
 - d. If LCRA TSC in the future needs the communication tower space (at the sole discretion of LCRA TSC), then GVEC will relocate their facilities upon written notice from LCRA TSC.
 - e. Changes in equipment elevation, azimuth, transmit power, or operating frequency must be preapproved by LCRA TSC
 - f. GVEC shall operate the RF equipment under all FCC requirements

FACILITY SCHEDULE NO. 6

Amendment No 12

1. **Name:** Marion Substation
2. **Facility Location:** The Marion Substation is located at 1885 Creek Rd., Marion, Guadalupe County, Texas 78124.
3. **Points of Interconnection:** There are four (4) Points of Interconnection in the Marion Substation generally described as:
 - where the 138 kV Operating Bus #1 extension bolts to the four hole pad on switch 5629.
 - where the 138 kV Operating Bus #2 extension bolts to the four hole pad on switch 5649.
 - where the 138 kV Operating Bus #1 extension bolts to the four hole pad on switch 26249.
 - where the 138 kV Operating Bus #2 extension bolts to the four hole pad on switch 26259.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Service Agreement between the Parties.
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering current transformers are located inside of GVEC's power transformer T2. The metering potential transformer is located on the 24.9 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

GVEC owns:

 - Two (2) 138 kV A-frame structures, foundations, insulators, and jumpers for the GVEC 138 kV transmission line to Cibolo
 - Five (5) 138 kV circuit breakers 5630, 5640 (spare), 5650, 26250 and 26270 including foundations, jumpers, and protective relaying
 - Fourteen (14) 138 kV switches 5629, 5631, 5639, 5641, 5649, 5651, 26259, 26249, 26308, 26251, 26261, 26271, 26269 and 26314 including foundations, structures and jumpers

- One (1) 138 kV mobile transformer connection point
- One (1) surge arrester SA19
- One (1) coupling capacitor voltage transformer CCVT11
- One (1) power transformer T2 with associated surge arresters, foundation, jumpers and protective relaying
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All T2 distribution circuit breakers including jumpers, protective relay packages and foundations.
- All T2 distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus, bus potential transformer and associated cabling
- One (1) modulation transformer MTU2 with associated surge arrester and fuses

LCRA TSC owns:

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

- 138 kV bus #1 including structures, insulators, foundations, and jumpers
- 138 kV bus #2 including structures, insulators, foundations, and jumpers
- 138 kV bus extensions for 138 kV bus #1 and bus #2 including structures, foundations, and insulators
- Two (2) 138 kV bus potential transformers PT9 and PT10
- Two (2) 138 kV bus differential and breaker failure relaying schemes
- Four (4) 138 kV switches 5659, 5661, 5669, and 5671
- Two (2) 138 kV power voltage transformers PVT1 and PVT2
- Two (2) 138kV surge arresters SA24 and SA25
- Battery bank and charger
- Two (2) 345 kV control houses (34' x 65') and (24' x 51')
- One new (1) 138 kV control house (36' x 66')
- One (1) Battery House (12' x 21')
- Substation property, ground grid, gravel, fencing, and other appurtenances

- 10. Operational Responsibilities of Each Party:** Each Party is 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:**
 - GVEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors, with regard to LCRA TSC physical security.
 - The Parties acknowledge the termination of the 1978 Marion Project Agreement by its own terms.
 - The existing NBU/GVEC-owned facilities listed below have been transferred to LCRA TSC:

- 138 kV operating buses 1 and 2 and associated bus potential transformers: PT9 and PT10;
 - 138 kV bus differential relaying; and,
 - Control house
 - The GVEC unused 138 kV line bay (as described below, and as previously labeled as a future Schumansville line bay) has been transferred to LCRA TSC for use in connection with LCRA TSC's future second 345/138 kV autotransformer, including:
 - 138 kV A-Frame
 - 138 kV switches 5659, 5669, 5661, and 5671
 - 138 kV bay pipe buswork.
- Each Party is responsible for its design associated with the relocation of its panels and equipment between control houses. LCRA TSC will, at no cost to GVEC, relocate four (4) GVEC control panels (three (3) line breaker panels and one (1) transmission metering panel) from the original control house to the new 138 kV control house, including assigning new panel numbers. LCRA TSC will, at no cost to GVEC, provide and run new cables, per GVEC design / cable assignment, between the four (4) relocated panels and the equipment in the yard; but thereafter, ownership and maintenance of these cables to be the responsibility of GVEC. Each Party will be fully responsible for its documentation (print set) changes and for terminating the cables on the control panels and equipment (i.e. circuit breakers) that it owns.
- To accommodate the GVEC addition of power transformer (T2) with 138 kV circuit breakers, LCRA TSC will expand the 138kV bus including bus differential and breaker failure relaying modifications.
- LCRA TSC will provide GVEC access to 125 VDC and 120 VAC power. Circuits must have over current protection devices (OCPD) sized according to NEC standards. Panel boards containing the OCPD may belong to either LCRA TSC (if space is available) or GVEC.
- LCRA TSC will provide GVEC with floor space (as available and as necessary) in its new 138 kV control house for the installation of GVEC required relay panel boards and equipment.
- GVEC shall supply and provide metering current transformers from power transformer T2 for LCRA TSC metering.
- GVEC shall supply and provide 24.9 kV bus potential transformer from T2 24.9 kV operating bus for LCRA TSC metering.
- GVEC will supply and provide relaying current transformers from GVEC's circuit breakers 5630 and 26250 for use by LCRA TSC in LCRA TSC's 138 kV Bus #1 differential relaying scheme.
- LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138 kV Bus #1 differential & breaker failure relaying panel to GVEC's circuit breakers 5630 and 26250 relaying panels.
- GVEC will provide breaker failure initiate contacts from GVEC's 138 kV circuit breakers 5630 and 26250 relaying panels to LCRA TSC's 138 kV Bus #1 differential & breaker failure relaying panel.
- GVEC will supply and provide relaying current transformers from GVEC's circuit

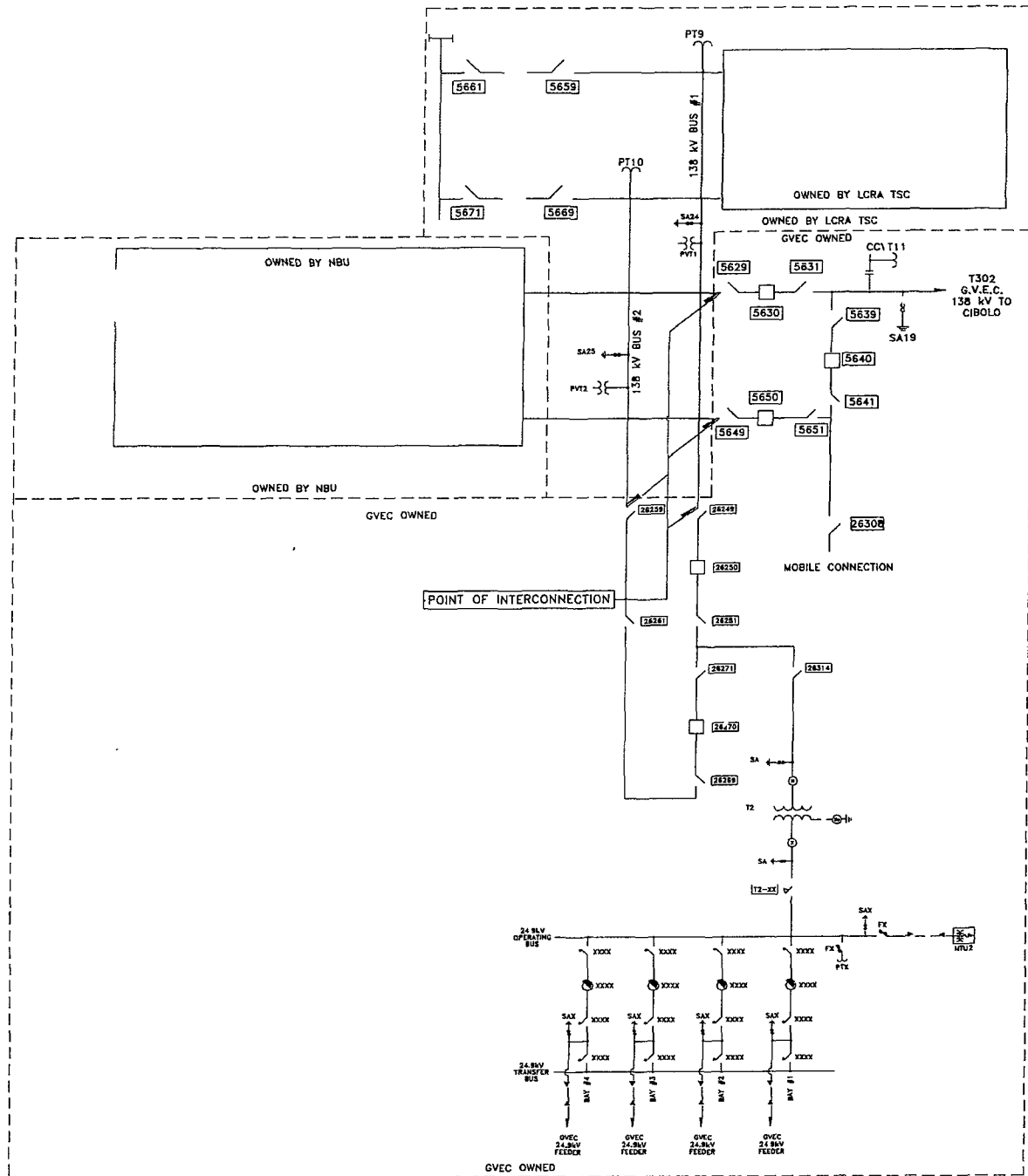
breakers 5650 and 26270 for use by LCRA TSC in LCRA TSC's 138 kV Bus #2 differential relaying scheme

- LCRA TSC will provide tripping and close inhibit contacts from LCRA TSC's 138 kV Bus #2 differential & breaker failure relaying panel to GVEC's circuit breakers 5650 and 26270 relaying panels.
- GVEC will provide breaker failure initiate contacts from GVEC's 138 kV circuit breakers 5650 and 26270 relaying panels to LCRA TSC's 138 kV Bus #2 differential & breaker failure relaying panel.
- LCRA TSC and GVEC 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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MARION ONE-LINE DIAGRAM

Amendment No. 12



MARION SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS
SUBSTATION, REFER TO DRAWING S223-E-0001-01.

FACILITY SCHEDULE NO. 9

Amendment No 12

1. **Name:** Schumansville Substation
2. **Facility Location:** The Schumansville Substation is located at 500 W. Zipp Rd., New Braunfels, Guadalupe County, Texas 78130.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Schumansville Substation generally described as:
 - where the GVEC jumper attaches to the LCRA TSC Schumansville to Sheriffs Posse 138 kV transmission line at the GVEC dead end structure inside the Schumansville Substation.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Service Agreement between the Parties.
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformers are located in the T1 transformer bus and internal to T2. The bus potential transformer is located on the 24.9 kV operating bus
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

GVEC owns:
The Schumansville Substation including, all equipment and facilities except those listed as being owned by LCRA TSC.

 - The following transmission lines comprised of conductors, insulators, and connecting hardware:
 - Schumansville to McQueeney 138 kV transmission line
 - One (1) 138 kV jumper from substation equipment to Point of Interconnection at LCRA TSC's 138 kV Schumansville to Sheriffs Posse transmission line
 - Substation property, ground grid, gravel, fencing and other appurtenances

LCRA TSC owns:

 - The following transmission line including dead end insulators and hardware:
 - 138 kV Schumansville to Sheriffs Posse transmission line
 - One (1) EPS meter panel (Panel 1) with meters
 - One (1) billing meter panel (Panel 6)
 - One (1) RTU panel (Panel 16)

- One (1) SIP panel (Panel 20)
- Two (2) 24.9 kV bus potential transformers PT1 and PT2 with associated fuses F2 and F4
- One (1) metering current transformer CT4

10. Operational Responsibilities of Each Party: Each Party is responsible for the operation of the equipment it owns.

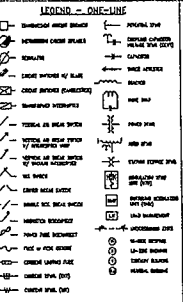
11. Maintenance Responsibilities of Each Party: Each Party will be fully responsible for the maintenance of the equipment it owns.

12. Other Terms and Conditions:

- GVEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.
- GVEC will provide and allow LCRA TSC use of power transformer T2's bushing current transformer for metering.

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Amendment No 12



FACILITY SCHEDULE NO. 16
Amendment No. 12

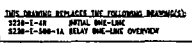
1. **Name:** Yoakum-Gartner Road Substation
2. **Facility Location:** The Yoakum-Gartner Road Substation is located at 201 Gaettner St., Yoakum, Dewitt County, Texas 77995.
3. **Points of Interconnection:** There are eleven (11) Points of Interconnection in the Yoakum-Gartner Road Substation generally described as:
 - where the incoming distribution line connects to the tubular bus between switches Y251 and Y253 at breaker YM101.
 - where the jumper from circuit breaker YM101, passing through CT4, connects to the four hole pad on switch Y249.
 - where the jumper from circuit breaker YM101 connects to the four hole pad on switch Y251.
 - where the jumper from switch Y219 connects to the 12.5 kV operating bus at breaker YM301.
 - where the jumper from switch Y223 connects to the 12.5 kV transfer bus at breaker YM301.
 - where the jumper from switch Y229 connects to the 12.5 kV operating bus at breaker YM201.
 - where the jumper from switch Y233 connects to the 12.5 kV transfer bus at breaker YM201.
 - where the jumper from switch Y159 connects to the 12.5 kV operating bus at breaker YM401.
 - where the jumper from switch Y163 connects to the 12.5 kV transfer bus at breaker YM401.
 - where the jumper from switch Y139 connects to the 12.5 kV operating bus at breaker YM501.
 - where the jumper from switch Y143 connects to the 12.5 kV transfer bus at breaker YM501.
4. **Transformation Services Provided by LCRA TSC:** Yes, per Transformation Service Agreement between the Parties.
5. **Metering Services Provided by LCRA TSC:** Yes, per Wholesale Metering Service Agreement between the Parties.
6. **Delivery Voltage:** 12.5 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are located in both total bays and in each distribution bay. The bus potential transformers are located on the 12.5 kV operating buses.

8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**
GVEC owns:
- Five (5) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
 - Five (5) distribution circuit breakers YM101, YM201, YM301, YM401 and YM501 including jumpers and protective relay packages
 - Four (4) distribution and total bays (bays #1-4, #1-6, # 2-2 and #2-3) including A-frames (2 in bay #2-2), trusses (2 upper and 4 lower), insulators, disconnect switches and surge arresters
 - Two (2) load management systems LM (both labeled LM)
- LCRA TSC owns:
The Yoakum-Gartner Road Substation including, but not limited to, the following items:
- 138 kV operating and transfer bus including structures, insulators, foundations and jumpers
 - Four (4) 138 kV switches 4323, 4333, 4334 and 4XXXX
 - One (1) 138 kV surge arrester SA1
 - One (1) 138 kV bus potential transformer PT1
 - Two (2) circuit switchers CS4325 and CS4335 with bypass switches 4337 and XXXX
 - Two (2) power transformers T2 and T3 and associated surge arresters
 - All distribution and total bays (except those listed as being owned by GVEC) including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformers, current metering transformers and associated cabling
 - Two (2) Transformer bus T2 and T3 disconnect switches Y154 and Y244
 - Control house and battery bank
 - Two (2) station service SS1 and SS2
 - Underfrequency relay panel
10. **Operational Responsibilities of Each Party:** Each Party is 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:** GVEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

DIAGRAM

Amendment No. 12

Amendment No. 12

[illegible]

LCRA
LAWYERS FOR CONSUMERS

LOWER COLORADO RIVER AUTHORITY
AUSTIN, TEXAS
LOCATION
YOAKUM GARTNER ROAD SUBSTATION

INITIAL ONE-LINE

DATE
3-2010
SCALE
17.5
SVC. NO.
S220-E-1-1C