



Control Number: 35077



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Project No. 35077

Amendment No. 19

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INTERCONNECTION AGREEMENT

Between

LCRA Transmission Services Corporation

and

Oncor Electric Delivery Company LLC

January 3, 2017

701 1

**AMENDMENT TO
INTERCONNECTION AGREEMENT**

This Amendment No. 19 ("Amendment") is made and entered into this 3RD day of JANUARY, 2017, between Oncor Electric Delivery Company LLC ("Oncor"), and the LCRA Transmission Services Corporation ("LCRA TSC"), hereinafter individually referred to as "Party" and collectively referred to as "Parties".

WHEREAS, LCRA TSC and Oncor entered into that certain Interconnection Agreement executed October 17, 1997, as amended (the "Agreement");

WHEREAS, LCRA TSC will install high voltage circuit breakers at LCRA TSC's Upton Substation; and

WHEREAS, LCRA TSC will install high voltage circuit breakers at LCRA TSC's Georgetown South 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 Exhibit A attached to this Amendment is hereby added to the Agreement.
2. Exhibit A attached to this Amendment will become effective upon execution of this Amendment by the Parties.
3. Facility Schedule No. 12 attached to the Agreement is hereby deleted in its entirety and Facility Schedule No. 12 attached to this Amendment No. 19 is hereby added to the Agreement in lieu thereof.
4. Facility Schedule No. 12 attached to this Amendment No. 19 will become effective upon execution of this Amendment No. 19 by the Parties.
5. Facility Schedule No. 25 attached to the Agreement is hereby deleted in its entirety and Facility Schedule No. 25 attached to this Amendment No. 19 is hereby added to the Agreement in lieu thereof.
6. Facility Schedule No. 25 attached to this Amendment No. 19 will become effective upon execution of this Amendment No. 19 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 Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

ONCOR ELECTRIC DELIVERY COMPANY
LLC

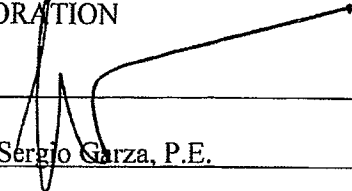
By: 

Name: Terry Preuninger

Title: Sr. Director -- Transmission Services

Date: 1/3/2017

LCRA TRANSMISSION SERVICES
CORPORATION

By: 

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission
Design and Protection

Date: December 20, 2016



EXHIBIT A

LIST OF FACILITY SCHEDULES AND POINTS OF INTERCONNECTION

FACILITY SCHEDULE NO.	LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)	INTERCONNECTION VOLTAGE (kV)	EFFECTIVE DATE OR SUBSEQUENT AMENDMENT IN THE INTERCONNECTION AGREEMENT*
1	Round Rock-Chief Brady (1)	138	October 17, 1997
2	Round Rock-Wells Branch (2)	138	October 29, 2012
3	Copperas Cove Substation (1)	138	October 27, 2000
4	Elgin Substation (1)	138	November 19, 1999
5	Round Rock South-Wells Branch (1)	138	October 29, 2012
6	Camp Bowie Substation (1)	138	October 27, 2000
7	Gilleland Creek Substation (2)	138	October 29, 2012
8	Mitchell-Sterling County (1)	345	April 28, 2008
9	Brown Switching Station (2)	345	December 17, 2015
10	Spraberry (1)	138	March 3, 2016
11	Midkiff (2)	138	Nov 22, 2013
12	Upton (1)	138	Date of 19 th Amendment
13	Crane (1)	138	October 5, 2004
14	Arco Substation (1)	138	October 18, 2016
15	Odessa EHV (1)	138	October 5, 2004
16	Bitter Creek Substation (2)	345	October 31, 2003
17	Brownwood-Firerock (1)	138	October 29, 2012
18	South Abilene-Eskota (1)	138	October 5, 2004
19	Crane East Substation (2)	138	October 27, 2006
20	Hutto Switching Station (2)	345	October 29, 2012
21	Gabriel Substation (2)	138	October 29, 2012
22	Pleasant Farms Substation (1)	138	7/22/2015
23	Benedum Substation (2)	138	March 3, 2016
24	Georgetown East Substation (2)	138	March 3, 2016
25	Georgetown South Substation (2)	138	Date of 19 th Amendment

FACILITY SCHEDULE NO. 12

Amendment No. 19

1. **Name:** Upton
2. **Facility Location:** Oncor's Upton Substation ("Oncor's Substation") is located in Upton County, Texas at Latitude 31.4384000 and Longitude -101.885000.
3. **Point of Interconnection location:** The Point of Interconnection shall be provided by an LCRA TSC 138 kV transmission line from LCRA TSC's Upton Substation ("LCRA TSC's Substation") to the Point of Interconnection ("LCRA TSC's Transmission Line"). LCRA TSC's Substation will be located on property adjacent to the east side of Oncor's Substation. The Point of Interconnection will be located at LCRA TSC's dead-end structure located outside Oncor's Substation ("LCRA TSC's Dead-end Structure") where LCRA TSC's jumpers from LCRA TSC's Transmission Line connect to Oncor's 138 kV slack span ("Oncor's Slack Span"), which will extend from LCRA TSC's Dead-end Structure to Oncor's dead-end structure inside Oncor's Substation ("Oncor's Dead-end Structure").
4. **Transformation Services Provided:** No
5. **Metering Services Provided:** No
6. **Delivery voltage:** 138 kV
7. **Metering Voltage and Location:** N/A
8. **One line diagram attached:** Yes
9. **Description of Facilities Owned by Each Party:**

Facilities to be owned by Oncor:

Oncor's Substation including, but not limited to, the following:

- (a) Oncor's Slack Span, including associated connectors, transmission line conductors, shield wire, and hardware
- (b) Oncor's Dead-end Structure
- (c) 138 kV circuit switcher and motor operated air switch CS2162
- (d) Three 138 kV lightning arresters
- (e) Main transformer, low-side facilities, and associated protective relaying and control equipment
- (f) Property, structures, hardware, buswork, conduit, cable, grounding, foundations, earthwork, control house and fencing
- (g) Telemetry equipment, including Oncor's RTU
- (h) Communication facilities from Oncor's RTU to Oncor's Control Center

Facilities to be owned by LCRA TSC:

LCRA TSC's Substation including, but not limited to, the following:

- (a) LCRA TSC's Substation to LCRA TSC's Benedum Substation 138 kV transmission line
- (b) LCRA TSC's Substation to LCRA TSC's Crane East Substation 138 kV transmission line
- (c) LCRA TSC's Transmission Line, including associated connectors, transmission line conductors, shield wire, and hardware
- (d) LCRA TSC's Dead-end Structure
- (e) Three (3) 138 kV A-frame dead end structures, foundations, insulators and jumpers
- (f) Two (2) 138 kV circuit breakers 26120 and 26130 including foundation, jumpers and protective relay packages
- (g) 138 kV operating and transfer bus including structures, insulators, foundations and jumpers
- (h) One (1) 138 kV bus differential & breaker failure relaying scheme
- (i) Four (4) 138 kV switches 26119, 26121, 26129, and 26131
- (j) Four (4) 138 kV motor operated switches MO26109, MO27589, MO27599, and MO27579
- (k) Two (2) 138 kV coupling capacitor voltage transformers CCVT1 and CCVT2
- (l) Four (4) 138 kV surge arresters SA1, SA2, SA3, and SA4
- (m) One (1) 138 kV dual core current transformer CT1
- (n) One (1) 138 kV power voltage transformer PVT1
- (o) One (1) RTU and SIP panel
- (p) One (1) 95' communications tower
- (q) One (1) control house with substation batteries, battery charger and other appurtenances
- (r) Substation property, ground grid, gravel, fencing and other appurtenances

10. Operation Responsibilities of Each Party: Each Party will be responsible for the operation of the facilities it owns.

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

12. Supplemental terms and conditions:

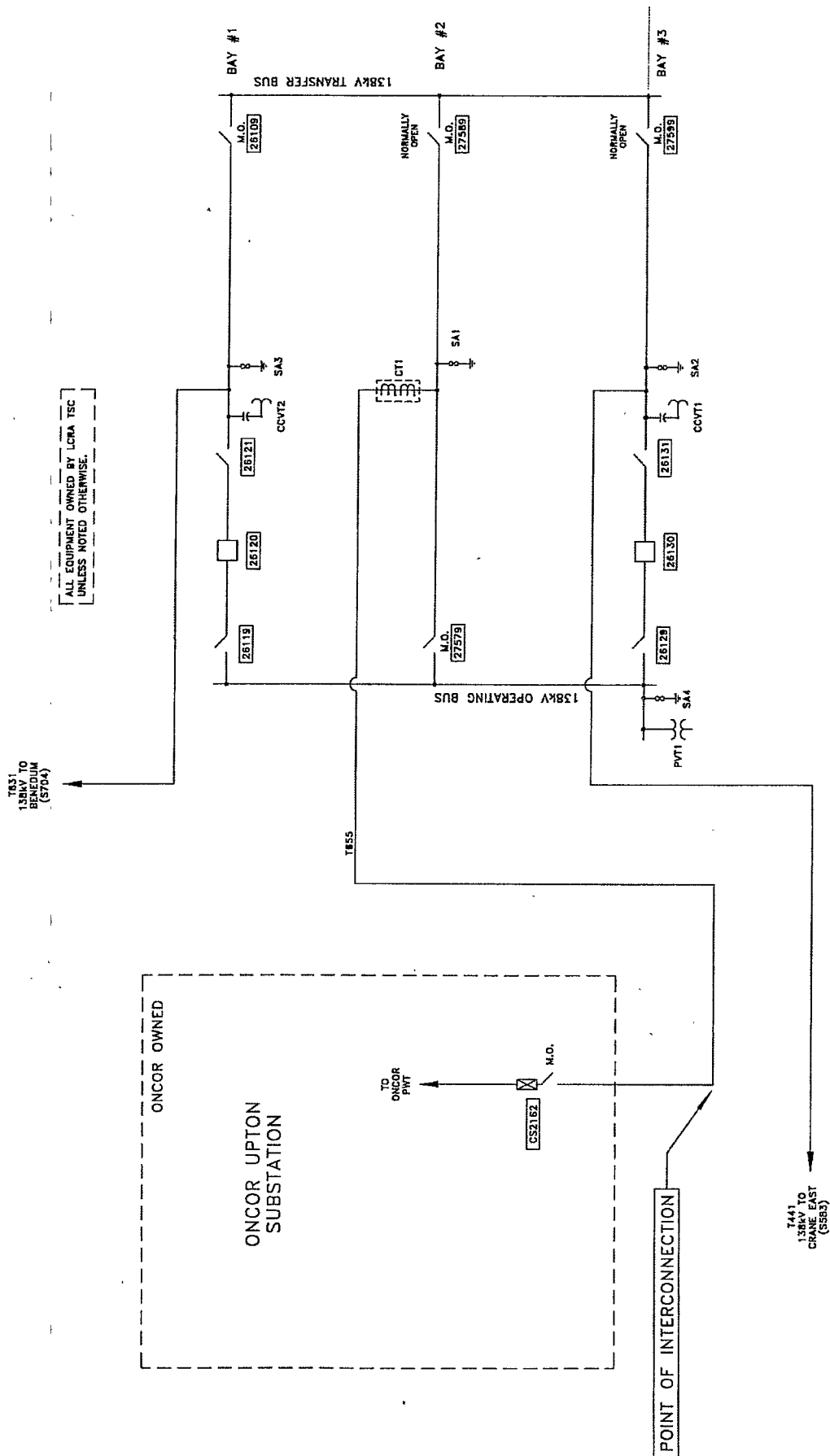
- (a) Oncor and LCRA TSC will each be responsible for all costs it incurs in connection with constructing, operating, and maintaining its facilities in accordance with this Facility Schedule; provided, however, that this Paragraph 12(a) is subject to any other provisions of this Agreement with respect to liability and indemnification, and this Paragraph 12(a) shall not relieve either Party of its respective obligations under those provisions.
- (b) Oncor will telemeter power flows, device status, and secondary bus voltage from Oncor's Substation to Oncor's Control Center.
- (c) The LCRA TSC will telemeter power flows, device status, and bus voltage from LCRA TSC's Substation to LCRA TSC's Control Center.
- (d) Each Party will provide data to ERCOT in accordance with ERCOT requirements.
- (e) The LCRA TSC and Oncor shall design and coordinate their respective protection system equipment in accordance with ERCOT requirements.
- (f) Each Party will conduct its activities associated with the Points of Interconnection in accordance with applicable laws, regulations, tariffs, and all binding documents developed by the Electric Reliability Council of Texas and the North American Electric Reliability

Corporation ("Binding Documents"). To the extent that any provision of the Agreement, including the provisions of this Facility Schedule, is in conflict with any mandatory provision of the Binding Documents, such mandatory provision will prevail. Notwithstanding any provision of the Agreement to the contrary, to the extent any provision of the Agreement is in conflict with a provision of this Facility Schedule, such provision of this Facility Schedule will prevail.

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FACILITY SCHEDULE NO. 12 Amendment No. 19

ONE LINE DIAGRAM UPTON SUBSTATION POINT OF INTERCONNECTION



FACILITY SCHEDULE NO. 25

1. **Name:** Georgetown South Substation
2. **Facility Location:** Georgetown South Substation is located at 950 Rabbit Hill Road in the city of Georgetown, Williamson County, Texas 78626.
3. **Point of Interconnection location:** There are two (2) 138 kV "Points of Interconnection" at Georgetown South Substation described as the points where LCRA TSC's jumpers connect to Oncor's Round Rock – Gabriel 138 kV transmission line ("Oncor's Transmission Line") at Oncor's in-line structures #32/3 and #32/4 ("Oncor's In-Line Structures").
4. **Transformation Services Provided:** N/A
5. **Metering Services Provided:** N/A
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** N/A
8. **One line diagram attached:** Yes
9. **Description of Facilities Owned by Each Party:**

Facilities to be owned by Oncor:

- (a) Oncor's Transmission Line
- (b) Oncor's Transmission Line dead end hardware and insulators
- (c) Oncor's In-Line Structures

Facilities to be owned by LCRA TSC:

The following facilities at Georgetown South Substation including, but not limited to:

- (a) Four 138 kV line cut-in dead-end structures
- (b) Two A-frame structures
- (c) Two 138 kV slack lines from Oncor's In-Line Structures to LCRA TSC's dead-end structures
- (d) 138 kV jumpers from LCRA TSC's slack lines to Oncor's Transmission Line
- (e) 138 kV ring bus (operating bus)
- (f) One (1) 138 kV bus differential and breaker failure relaying scheme
- (g) Four (4) 138 kV circuit breakers 27420, 27430, 27440, and 27450 with foundations, jumpers, and protective relaying
- (h) Eight (8) 138 kV switches 27419, 27421, 27429, 27431, 27439, 27441, 27449, and 27451
- (i) Two (2) coupling capacitor voltage transformers CCVT1 and CCVT2
- (j) One (1) wave trap WT1 with carrier panel
- (k) Three (3) 138 kV surge arrester SA1, SA2, and SA5 with stands and foundations
- (l) One (1) 138 kV power voltage transformer PVT1

- (m) One (1) meter panel with meters
- (n) 12.5 kV metering current transformers
- (o) One (1) control house (24' x 42') with batteries, battery charger, and appurtenances
- (p) SCADA and associated communication facilities to monitor and control LCRA TSC's facilities in Georgetown South Substation from LCRA TSC's Control Center
- (q) Substation property, ground grid, gravel, fencing, and other appurtenances

10. Operational Responsibilities of Each Party:

- (a) Oncor will be responsible for the operation of the equipment it owns.
- (b) LCRA TSC will be responsible for the operation of the equipment it owns, provided that the operation of LCRA TSC's circuit breakers 27420, 27430, 27440, and 27450 will be coordinated with Oncor's system operator. LCRA TSC's circuit breakers will be operated in the normally closed position. No change will be made in the normal operation of the Points of Interconnection without the mutual agreement of the Parties.

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

12. Supplemental terms and conditions:

- (a) Oncor and LCRA TSC will each be responsible for all costs it incurs in connection with constructing, operating, and maintaining its facilities in accordance with this Facility Schedule; provided, however, that this Paragraph 12(a) is subject to any other provisions of this Agreement with respect to liability and indemnification, and this Paragraph 12(a) shall not relieve either Party of its respective obligations under those provisions.
- (b) LCRA TSC will monitor power and energy flows, device status, and bus voltage at Georgetown South Substation associated with the Points of Interconnection. LCRA TSC will provide such data to ERCOT in accordance with ERCOT Requirements.
- (c) Each Party will conduct its activities associated with the Points of Interconnection in accordance with applicable laws, regulations, tariffs, and all binding documents developed by the Electric Reliability Council of Texas and the North American Electric Reliability Corporation ("Binding Documents"). To the extent that any provision of the Agreement, including the provisions of this Facility Schedule, is in conflict with any mandatory provision of the Binding Documents, such mandatory provision will prevail. Notwithstanding any provision of the Agreement to the contrary, to the extent any provision of the Agreement is in conflict with a provision of this Facility Schedule, such provision of this Facility Schedule will prevail.

FACILITY SCHEDULE NO. 25 **Amendment No. 19** **GEORGETOWN SOUTH ONE-LINE DIAGRAM**

