

Control Number: 35077



Item Number: 128

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PUC Project No. 35077

Amendment No. 1 to the

# **INTERCONNECTION AGREEMENT**

## Between

**AEP Texas Central Company** 

and

LCRA Transmission Services Corporation

March 16, 2007



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#### AMENDMENT NO. 1 TO THE INTERCONNECTION AGREEMENT BETWEEN AEP TEXAS CENTRAL COMPANY AND LCRA TRANSMISSION SERVICES CORPORATION

This Amendment No. 1 ("this Amendment") to the Interconnection Agreement between AEP Texas Central Company and LCRA Transmission Services Corporation ("the Interconnection Agreement") is made and entered into this 16th day of March, 2007, by and between AEP Texas Central Company and LCRA Transmission Services Corporation, each being referred to as a "Party" and both collectively referred to as the "Parties".

#### WITNESSETH:

WHEREAS, the Parties entered into the Interconnection Agreement on January 11, 2005 (including all Exhibits and Facility Schedules attached thereto) to restate and amend an earlier interconnection agreement between Central Power and Light Company (now known as AEP Texas Central Company ("AEP")) and the Lower Colorado River Authority (the assignor to LCRA Transmission Services Corporation ("LCRA")); and

WHEREAS, the Interconnection Agreement provides terms and conditions that allow a point of interconnection be added to or deleted from the Interconnection Agreement as mutually agreed by the Parties, whereby such addition or deletion be recorded in Exhibit A and a Facility Schedule be added or deleted in such a way that the numbering of the other Facility Schedules in the Interconnection Agreement is not changed; and

WHEREAS, the Parties have agreed to amend the Interconnection Agreement in accordance with its terms and conditions;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants set forth herein, the Parties agree as follows:

#### I. CAPITALIZED TERMS

Capitalized terms used but not otherwise defined herein shall have the meanings specified in the Interconnection Agreement, as amended and supplemented by this Amendment.

#### **II. AMENDMENTS**

Effective as of the date first written above, (a) Facility Schedules numbered 6 and 12 of the Interconnection Agreement are hereby amended, (b) Facility Schedules numbered 14 through 32 are hereby added to the Interconnection Agreement, and (c) Exhibit A of the Interconnection Agreement is hereby amended to record these changes. Such additional Facility Schedules, amended Facility Schedules and amended Exhibit A will be included in the Interconnection Agreement to form one consolidated and amended agreement.

**III. RATIFICATION OF OTHER TERMS** 

All other terms and conditions of the Interconnection Agreement which are not specifically amended by this Amendment shall remain unchanged and are hereby ratified by the Parties and shall continue to be in full force and effect.

IN WITNESS WHEREOF, the Parties have caused this Amendment No. 1 to the Interconnection Agreement to be executed in two (2) counterparts, each of which shall be deemed an original but both shall constitute one and the same instrument.

AEP TEXAS CENTRAL COMPANY

Bv

Name: Michael Heyeck Title: Vice President

Date: 3/16/07

### LCRA TRANSMISSION SERVICES CORPORATION

By /

Name: Ross Phillips Title: Vice President and Chief Operating Officer

Date: 3

## EXHIBIT A

.

FACILITY SCHEDULE NO.	LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)	INTERCONNECTION VOLTAGE (KV)	LAST DATE(S) OF AMENDMENT IN THIS OR PREVIOUS INTERCONNECTION AGREEMENT*
1 Δ	Luling $69(1)$	69	June 1, 1973
18	Luling 12.5 (1)	12.5	June 1, 1973
<u>1D</u>	Vorktown (1)	12.5	June 1, 1973
2	Nordheim (1)	12.5	June 1, 1973
3	Glidden (1)	138	October 8, 1979
	Cuero (1)	138	June 1, 1973
5	Camp Wood (1)	69	December 28, 1990
o			March 16, 2007
7	Nivon (1)	69	April 11,1994
/ Q	Leskey (1)	12.5	December 10, 1998
0	Coleto Creek (1)	345	January 11, 2005
	Citra North Oak Park (3)	138	January 11, 2005
10	Lon C Hill (2)	138	January 11, 2005
12	Highway $9(1)$	138	January 11, 2005
12	Inghway 7 (1)		March 16, 2007
12	Nueces Bay (2)	138	January 11, 2005
13	Cantwell (2)	138	March 16, 2007
14	Weil Tract (2)	138	March 16, 2007
15	Rincon (1)	138	March 16, 2007
10	Reckport (3)	138	March 16, 2007
17	Fulton (2)	138	March 16, 2007
10	$\frac{1}{2}$	138	March 16, 2007
20	Garceno (2)	138	March 16, 2007
20	Rio Grande City (2)	138	March 16, 2007
21	La Grulla (2)	138	March 16, 2007
22	Goodwin (2)	138	March 16, 2007
23			

 These dates do not necessarily reflect the date that the Point of Interconnection was established.

# **EXHIBIT A Continued**

FACILITY SCHEDULE NO.	LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)	INTERCONNECTION VOLTAGE (KV)	DATE INCLUDED IN THIS OR PREVIOUS INTERCONNECTION AGREEMENT*
_			March 16 2007
24	Frontera Switching Station 138 (1)	138	March 10, 2007
25	Asherton (1)	138	March 16, 2007
26	Conoco Chittam Ranch	138	March 16, 2007
27	$\frac{1}{2} = \frac{1}{2}$	138	March 16, 2007
28	Escondido Switching	138	March 16, 2007
20	Station(2)	138	March 16, 2007
29	A sphalt Mines (2)	138	March 16, 2007
21	Brocketville (2)	138	March 16, 2007
31	Hamilton Road (1)	138	March 16, 2007
32			
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	+		

\* These dates do not necessarily reflect the date that the Point of Interconnection was established.

Amendment No. 1

#### 1. Name: Camp Wood

- 2. Facility Location: The Camp Wood Substation is located at 735 River Road in the City of Camp Wood, Real County, Texas. There is one Point of Interconnection at this location. It is located at the point where the jumper conductors from the substation equipment physically contact the conductors on the 69 kV transmission line from the Bandera Electric Cooperative ("Bandera") Leakey Substation.
- 3. Delivery Voltage: 69 kV.
- 4. Metered Voltage and Location: 69 kV metering located on the 69 kV transmission line to the Leakey Substation.
- 5. Normal Operation of Interconnection: Closed
- 6. One Line Diagram Attached: Yes
- 7. Description of Facilities Owned by Each Party:

AEP owns the following facilities:

- the Camp Wood Substation and all the substation facilities within it, except for the LCRA facilities identified below.
- a four-wire RTU communication circuit from the station to the AEP control center

LCRA owns the following facilities:

- insulators and hardware connections on the dead-end structure that terminates the 69 kV line from the Leakey substation
- 8. Facility Operation Responsibilities of the Parties:
  - Each Party operates and controls the facilities it owns.
  - LCRA and AEP will coordinate the voltage profile that must be maintained in area stations equipped with 138/69 kV autotransformers (Uvalde, Sonora, and Bandera). Voltages at Sonora and Uvalde will be in compliance with the ERCOT Operating Guides and ERCOT Protocols.
  - Each party will be fully responsible for the maintenance of the facilities it owns.
- 9. Cost Responsibilities of the Parties:

- Each Party will be fully responsible for the cost and liabilities related to the facilities it owns.
- Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule
- 10. Other Terms and Conditions:
  - AEP will provide the relay equipment at Camp Wood and LCRA will provide the relay equipment at Leakey to protect the Camp Wood to Leakey 69 kV transmission line. The Parties will jointly review the overall protection scheme and mutually agree on the relay settings for this line.
  - AEP will furnish station service power at no cost to LCRA.
  - AEP will provide the terminal block connections for LCRA to receive metering and telemetry signals.
  - Bandera, a wholesale transmission customer of LCRA, has agreed to provide AEP a distribution point of delivery at its Leakey substation. All costs associated with the establishment of this distribution point of delivery will be AEP's responsibility.
  - AEP shall have the right to convert its facilities at Camp Wood to a higher voltage in the future. AEP agrees to notify LCRA of its intentions to do so at least three (3) years prior to any such conversion taking place.
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via its Inter-control Center Communications Protocol (ICCP) communication circuit to the ERCOT control center.



#### FACILITY SCHEDULE NO. 12 Amendment No. 1

- 1. Name: Highway 9
- 2. Facility Location: The Highway 9 Station is located in Corpus Christi, in Nueces County, Texas. The Point of Interconnection is at the termination of the 138 kV transmission line from the Citgo North Oak Park Station where the jumper conductors from the substation equipment physically contact the connectors on the 138kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Highway 9 Station and all the substation facilities within it
- transmission line relay protection panel and all associated equipment for the LCRA transmission line
- the Remote Terminal Unit (RTU)
- a four-wire RTU communications circuit from the station to the AEP control center
- jumper conductors from the station facilities to the Point of Interconnection
- the following transmission lines comprised of easements, conductors, shield wires, insulators, connecting hardware, and structures;
  - Highway 9 to Nueces Bay 138 kV transmission line
  - Highway 9 to Arcadia 138 kV transmission line
  - Highway 9 to Javelina 138 kV transmission line
  - Highway 9 to Morris St 138 kV transmission line
  - all 69 kV transmission lines that terminate at the Highway 9 Station
- substation deadend structures that terminate all transmission lines into the station

• OPGW shield/fiber aerial cable, transmission line easements, fiber optic communications circuits, under-built distribution voltage circuits, and the Industrial to Highway 9 69kV transmission circuit comprised of conductors, insulators and connecting hardware attached to LCRA's Highway 9 to Citgo North Oak Park 138 kV transmission line structures.

LCRA owns the following facilities:

- insulators and hardware connections on the deadend structure that terminates the 138 kV line from the Citgo North Oak Park Station.
- the following transmission lines comprised of licenses, conductors, insulators, connecting hardware, and structures;
  - o Highway 9 to Citgo North Oak Park Station 138 kV transmission line
- a four-wire RTU communications circuit from the station to the LCRA control center
- 8. Facility Operation Responsibilities of the Parties:
  - AEP controls and operates the Highway 9 Substation, including all facilities within it.
  - AEP controls and operates all of the transmission lines that terminate into the station.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:

- Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a four-wire RTU communications circuit until such time that a direct Inter-control Center Communications Protocol (ICCP) communication circuit is established between the Parties' control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.
- AEP will provide physical space at the station for LCRA to terminate a four-wire RTU communications circuit until such time that LCRA establishes its ICCP communication circuit between control centers.



- 1. Name: Cantwell
- 2. Facility Location: The Cantwell Substation is owned by Valero Refining Texas, L.P. and is located on Cantwell Lane near Up River Road in Corpus Christi, Texas. There are two (2) Points of Interconnection at the Cantwell Substation. Each of these Points of Interconnection are located at the point where the jumper conductors from the line side disconnect switches inside the substation physically contact the connectors on the Citgo North Oak Park to Cantwell and Weil Tract to Cantwell 138 kV transmission lines.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

Valero Refining-Texas LP owns the following facilities:

- the Cantwell Substation, including the 138 kV ring bus comprised of circuit breakers and switches, and all facilities within it except for the metering and telemetry equipment owned by AEP
- conductors and connecting hardware from the 138 kV metering instrument transformers to the 138 kV line side disconnect switches and 138 kV bus inside the Cantwell Substation

AEP owns the following facilities:

- 2 -revenue quality meter instrument transformers (one at each Point of Interconnection) located inside the Cantwell Substation
- 1 Remote Terminal Unit (RTU) inside the substation
- a four-wire RTU communications circuit from the substation to the AEP control center
- 1 dynamics and fault recorder inside the substation
- fiber optic multiplexer, cable, conduit, splice box, and termination panel inside the substation for the fiber optics from the Citgo North Oak Park Substation
- OPGW shield/fiber aerial cable, transmission line easements, fiber optic

communications circuits, under-built distribution voltage circuits, and the following transmission circuits comprised of conductors, insulators, and connecting hardware:

- Coastal States East to Avery Point 69 kV transmission circuit attached to LCRA's Citgo North Oak Park to Cantwell 138 kV transmission line structures
- Nueces Bay to Highway 9 69 kV transmission circuit attached to LCRA's Citgo North Oak Park to Cantwell 138 kV transmission line structures
- Nueces Bay to Highway 9 69 kV transmission circuit attached to LCRA's Cantwell to Weil Tract 138 kV transmission line structures
- Valero East to Highway 9 69 kV transmission circuit attached to LCRA's Cantwell to Weil 138 kV transmission line structures

LCRA owns the following facilities:

- 2 deadend structures in the Citgo North Oak Park to Weil 138 kV transmission line that turns the line in and out of the Cantwell Substation
- the following transmission lines comprised of licenses, conductors, insulators, connecting hardware, and structures;
  - the Citgo North Oak Park to Cantwell 138 kV transmission line
  - o the Weil Tract to Cantwell 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the 138 kV ring bus (six 138 kV circuit breakers and related disconnect switches) inside the Cantwell substation.
  - AEP also controls and operates all of the transmission lines that terminate into the substation
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.

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- Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:

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AEP will poll the AEP RTU installed inside the substation and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the Parties' control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Weil Tract
- 2. Facility Location: The Weil Tract Switching Station is located on Corn Products Road near Leopard Street in Corpus Christi, Texas. There are two (2) Points of Interconnection at Weil Tract. One is at the termination of the 138 kV transmission line from the Cantwell Substation and the other is at the termination of the 138 kV transmission line from the Lon C. Hill Substation. Both Points of Interconnection are at the point where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Weil Tract Substation and all the substation facilities within it
- transmission line relay protection system for the termination of the 138 kV transmission lines from the Cantwell and Lon C. Hill substations
- the Remote Terminal Unit (RTU)
- a four-wire RTU communications circuit from the station to the AEP control center
- jumper conductors from the substation facilities to the Points of Interconnection
- substation deadend structures that terminate all transmission lines into the substation

• the following transmission lines comprised of easements, conductors, shield wires, insulators, connecting hardware, and structures;

- Weil Tract to Citgo West 138 kV transmission line
- Weil Tract to Westside 138 kV transmission line
- OPGW shield/fiber aerial cable, transmission line easements, the attached fiber optic communications circuits, under-built distribution voltage circuits, and the following transmission circuits comprised of conductors, insulators and connecting hardware:

- Nueces Bay to Highway 9 69 kV transmission circuit attached to LCRA's Cantwell to Weil Tract 138 kV transmission line structures
- Valero East to Highway 9 69 kV transmission circuit attached to LCRA's Cantwell to Weil Tract 138 kV transmission line structures
- Kingsville to Lon C. Hill 138 kV transmission circuit attached to LCRA's Weil Tract to Lon C. Hill 138 kV transmission line structures

LCRA owns the following facilities:

- 6 transmission line deadend structures within the Weil Tract Substation
- the following transmission lines comprised of licenses, conductors, insulators, connecting hardware, and structures;
  - o the Weil Tract to Lon C. Hill 138 kV transmission line
  - o the Weil Tract to Cantwell 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Weil Substation, including all facilities within it.
  - AEP also controls and operates all of the transmission lines that terminate into the substation.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed inside the substation and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol

(ICCP) communication circuit between the Parties' control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Rincon Switching Station
- 2. Location: The Rincon Switching Station is located near Taft, Texas in San Patricio County. The Point of Interconnection is at the termination of the 138 kV transmission line from the Rockport Substation where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Rincon Switching Station and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- OPGW shield/fiber aerial cable and attached fiber optic communications circuits from the station to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- substation deadend subtrates that estimates and estimates and estimates that estimates and estindex estimates and estimates and estimates and estimates and e
  - Rincon to Seadrift Coke (Airco) 138 kV transmission line
  - Rincon to Whitepoint Switching Station 138 kV transmission line
  - Rincon to DuPont Switching Station double circuit 138 kV transmission
  - Rincon to Bonnie View 69 kV transmission line
  - Rincon to Gregory 69 kV transmission line
  - Rincon to Midway Pump 69 kV transmission line
- distribution line easements and any under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

• insulators and hardware on the deadend structures that terminate the 138 kV transmission line from the Rockport station

- the following transmission line(s) comprised of structures, conductors, insulators, easements and connecting hardware and attached OPGW shield/fiber aerial cable and fiber optic communications circuits:
  - o Rincon to Rockport 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Rincon Switching Station, including all facilities within it.
  - AEP controls and operates all transmission lines that terminate into the station.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Rockport
- 2. Location: The Rockport Substation is located near Rockport, Texas in Aransas County. There are two Points of Interconnection at the Rockport Substation. One Point of Interconnection is at the termination of the 138 kV transmission line from the Rincon Substation and the other is at the termination of the 69 kV transmission line from the Fulton Substation. Both Points of Interconnection are where the jumper conductors from the substation equipment physically contact the connectors on the transmission line conductors.
- 3. Delivery Voltage: 138 kV / 69 kV
- 4. Metered Voltage: 138 kV / 69 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Rockport Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- OPGW shield/fiber aerial cable and attached fiber optic communications circuits from the station to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, easements, conductors, insulators, and connecting hardware and any attached OPGW shield/fiber aerial cable and fiber optic communications circuits:
  - Rockport to Aransas Pass 69 kV transmission line
  - Rockport to Fulton via Live Oak 69 kV transmission line
- any under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

 insulators and hardware on the deadend structures that terminate the 138 kV transmission line from the Rincon station

- the following transmission line(s) comprised of easements, structures, conductors, insulators, shield wires and connecting hardware and any attached OPGW shield/fiber aerial cable and fiber optic communications circuits:
  - Rockport to Rincon 138 kV transmission line
  - o Rockport to Fulton 69 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Rockport Substation, including all facilities within it.
  - AEP controls and operates all transmission lines that terminate into the station.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Fulton
- 2. Location: The Fulton Substation is located near Fulton, Texas in Aransas County. The Point of Interconnection is at the termination of the 69 kV transmission line from the Rockport Substation where the jumper conductors from the substation equipment physically contact the connectors on the 69 kV transmission line conductors.
- 3. Delivery Voltage: 69 kV
- 4. Metered Voltage: 69 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Fulton Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, easements, conductors,
  - insulators, and connecting hardware: • Fulton to Rockport via Live Oak 69 kV transmission line
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 69 kV transmission line from the Rockport station
- the following transmission line(s) comprised of structures, conductors, insulators,
- shield wires, easements and connecting hardware:
  - Fulton to Rockport 69 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Fulton Substation, including all facilities within it.

- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Roma
- 2. Location: The Roma Substation is located in Roma, Texas in Starr County. The Point of Interconnection is at the termination of the 138 kV transmission line from the Garceno Substation where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Roma Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, easements, conductors, insulators, and connecting hardware:
  - Roma to Roma Tap 138 kV transmission line
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission line from the Garceno station
- the following transmission line(s) comprised of structures, conductors, insulators, easements, licenses, shield wires and connecting hardware:
  - Roma to Garceno 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Roma Substation, including all facilities within it.

- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Garceno
- 2. Location: The Garceno Substation is located in Garceno, Texas in Starr County. There are two Points of Interconnection at the Garceno Substation. One is at the termination of the 138 kV transmission line from the Roma Substation and the other is at the termination of the 138 kV transmission line from the Rio Grande City Substation. Both Points of Interconnection are at the point where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Garceno Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission lines from the Roma and Rio Grande City stations
- the following transmission line(s) comprised of structures, conductors, insulators, easements, licenses, shield wires and connecting hardware:
  - o Garceno to Roma 138 kV transmission line
  - o Garceno to Rio Grande City 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:

- AEP controls and operates the Garceno Substation, including all facilities within it
- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Rio Grande City
- 2. Location: The Rio Grande City Substation is located in Rio Grande City, Texas in Starr County. There are two Points of Interconnection at the Rio Grande City Substation. One is at the termination of the 138 kV transmission line from the Garceno Substation and the other is at the termination of the 138 kV transmission line from the La Grulla Substation. Both Points of Interconnection are at the point where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Rio Grande City Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, conductors, insulators and connecting hardware:
  - Rio Grande City to Garza 69 kV transmission line
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission lines from the Garceno and La Grulla stations
- the following transmission line(s) comprised of structures, conductors, insulators, shield wire, easements, licenses and connecting hardware:
  - o Rio Grande City to Garceno 138 kV transmission line
  - Rio Grande City to La Grulla 138 kV transmission line

- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Rio Grande City Substation, including all facilities within it.
  - AEP controls and operates all transmission lines that terminate into the station.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: La Grulla
- 2. Location: The La Grulla Substation is located in La Grulla, Texas in Starr County. There are two Points of Interconnection at the La Grulla Substation. One is at the termination of the 138 kV transmission line from the Rio Grande City Substation and the other is at the termination of the 138 kV transmission line from the Goodwin Substation. Both Points of Interconnection are at the point where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:
  - AEP owns the following facilities:
    - the La Grulla Substation and all the substation facilities within it
    - jumper conductors from the station facilities to the Point(s) of Interconnection
    - substation deadend structures that terminate all transmission lines into the station
    - a four-wire RTU communication circuit from the station to the AEP control center
    - any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission lines from the Rio Grande City and Goodwin stations
- the following transmission line(s) comprised of structures, conductors, insulators, easements, licenses, shield wires and connecting hardware:
  - o La Grulla to Rio Grande City 138 kV transmission line
  - La Grulla to Goodwin 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:

- AEP controls and operates the La Grulla Substation, including all facilities within it.
- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Goodwin
- 2. Location: The Goodwin Substation is located in Goodwin, Texas in Hidalgo County. There are two Points of Interconnection at the Goodwin Substation. One is at the termination of the 138 kV transmission line from the La Grulla Substation and the other is at the termination of the 138 kV transmission line from the Frontera Switching Station. Both Points of Interconnection are at the point where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Goodwin Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission lines from the North Weslaco station and Harlingen switching station
- the following transmission line(s) comprised of structures, conductors, insulators, easements, licenses, shield wires and connecting hardware:

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- Goodwin to La Grulla 138 kV transmission line
- Goodwin to Frontera Switching Station 138 kV transmission line
- 8. Facility Operation and Maintenance Responsibilities of the Parties:

- AEP controls and operates the Goodwin Substation, including all facilities within it.
- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 11. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



## 1. Name: Frontera Switching Station 138

- 2. Location: The 138 kV Frontera Switching Station is located near Mission, Texas in Hidalgo County. The Point of Interconnection is at the termination of the 138 kV transmission line from the Goodwin Substation where the jumper conductors from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Frontera Switching Station and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, easements, conductors, insulators, and connecting hardware:
  - Frontera Switching Station to J L Bates 138 kV transmission line
  - Frontera Switching Station to North McAllen 138 kV transmission line
  - Frontera Switching Station to North McAllen 196 kV transmission line
    Frontera Switching Station to Sharyland 138 kV transmission line
  - a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission line from the Goodwin station
- the following transmission line(s) comprised of structures, conductors, insulators, easements, shield wires and connecting hardware:
  - Frontera Switching Station to Goodwin 138 kV transmission line

## 8. Facility Operation and Maintenance Responsibilities of the Parties:

• AEP controls and operates the Frontera Switching Station, including all facilities within it.

- AEP controls and operates all transmission lines that terminate into the station.
- AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
- Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.



- 1. Name: Asherton
- 2. Location: The Asherton Substation is located in Asherton, Texas in Dimmit County. The Point of Interconnection is at the termination of the 138 kV transmission line from the Conoco Chittam Ranch Tap where the conductors from jumpers from the substation equipment physically contact the connectors on the 138 kV transmission line conductors.
- 3. Delivery Voltage: 138 kV
- 4. Metered Voltage: 138 kV
- 5. Normal Operation of Interconnection: Closed
- 6. One-Line Diagram Attached: Yes
- 7. Facility Ownership Responsibilities of the Parties:

AEP owns the following facilities:

- the Asherton Substation and all the substation facilities within it
- jumper conductors from the station facilities to the Point(s) of Interconnection
- substation deadend structures that terminate all transmission lines into the station
- the following transmission line(s) comprised of structures, easements, conductors, insulators, and connecting hardware:
  - Asherton to North Laredo Switching Station 138 kV transmission line
  - Asherton to Dilley Switching Station 138 kV transmission line
  - Asherton to West Batesville 138 kV transmission line
  - Asherton to Crystal City 69 kV transmission line
- a four-wire RTU communication circuit from the station to the AEP control center
- any distribution line easements and under-built distribution voltage circuits attached to the transmission lines that terminate into the station

LCRA owns the following facilities:

- insulators and hardware on the deadend structures that terminate the 138 kV transmission line from the Pueblo station
- the following transmission line(s) comprised of easements, structures, conductors, insulators, shield wires and connecting hardware:
  - Asherton to Conoco Chittam Ranch Tap 138 kV transmission line

- 8. Facility Operation and Maintenance Responsibilities of the Parties:
  - AEP controls and operates the Asherton Substation, including all facilities within it.
  - AEP controls and operates all transmission lines that terminate into the station.
  - AEP coordinates, directs, and performs all control center and field operation activities on the transmission line(s) owned by AEP and LCRA. These activities shall include, but are not limited to, switching, clearances, and outages for planned maintenance and operations, emergency service restoration, and overall coordination of such activities with ERCOT.
  - Each Party maintains the facilities it owns that are provided for in this Facility Schedule. Maintenance of the facilities, including circuit breaker relays, that are owned by one Party that protect the facilities owned by the other Party, will be subject to review and approval by the other Party.
- 9. Cost Responsibilities of the Parties:
  - Each Party will be fully responsible for the costs and liabilities related to the facilities it owns.
  - Each Party will be responsible for all costs it incurs in connection with the establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule.
- 10. Other Terms and Conditions:
  - AEP will poll the AEP RTU installed at the station and LCRA will have access to the RTU data via a direct Inter-control Center Communications Protocol (ICCP) communication circuit between the AEP and LCRA control centers. The Parties will coordinate the analog and digital point list and communications protocol issues.