

Control Number: 35077



Item Number: 852

Addendum StartPage: 0

PUC Project No. 35077

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PUBLIC UTILITY COMPASSION FILING CLERK

Amendment to Interchange Agreement

Between

South Texas Electric Cooperative

and

LCRA Transmission Services Corporation

July 5, 2018

AMENDMENT TO INTERCHANGE AGREEMENT

WHEREAS, Corporation will install the Cedar Canyon Switchyard in the STEC Bakersfield to Schneeman Draw 345 kV Transmission Line to accommodate the High Lonesome Wind Energy generator connection in accordance with ERCOT generation interconnection request (GINR) 19INR0038;

WHEREAS, the Corporation's addition of Cedar Canyon Switchyard will change the Interconnection Agreement transmission line destination at Bakersfield Substation;

WHEREAS, the Corporations addition of Cedar Canyon Switchyard will change the Interconnection Agreement transmission line destination at Schneeman Draw Substation;

WHEREAS, Corporation will install the Noelke Switchyard in the STEC Bakersfield to Schneeman Draw 345 kV Transmission Line to accommodate the Ranchero Wind Energy generator connection in accordance with ERCOT generation interconnection request (GINR) 20INR0011;

WHEREAS, the Corporation's addition of Noelke Switchyard will change the Interconnection Agreement transmission line destination at Bakersfield Substation; and,

WHEREAS, the Corporation's addition of Noelke Switchyard will change the Interconnection Agreement transmission line destination at Schneeman Draw Substation;

In consideration of the mutual promises and undertakings herein set forth, the Parties agree to amend the Agreement as follows:

- Facility Schedule No. 4 (including the diagrams attached thereto) attached to the Interchange Agreement is hereby deleted in its entirety and Facility Schedule No. 4 attached to this Amendment is added to the Agreement in lieu thereof.
- Facility Schedule No. 4 (including the diagrams attached thereto) attached to this Amendment will become effective upon execution of this Amendment by the Parties.
- Facility Schedule No. 13 (including the diagrams attached thereto) attached to the Interchange Agreement is hereby deleted in its entirety and Facility Schedule No. 13 attached to this Amendment is added to the Agreement in lieu thereof.
- Facility Schedule No. 13 (including the diagrams attached thereto) attached to this Amendment will become effective upon execution of this Amendment by the Parties.
- Facility Schedule No. 17 (including the diagrams attached thereto) attached to this amendment is hereby added to the Interchange Agreement.

- Facility Schedule No. 17 (including the diagrams attached thereto) attached to this Amendment will become effective upon execution of this Amendment by the Parties.
- Facility Schedule No. 18 (including the diagrams attached thereto) attached to this amendment is hereby added to the Interchange Agreement.
- Facility Schedule No. 18 (including the diagrams attached thereto) attached to this Amendment will become effective upon execution of this 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 Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

SOUTH TEXAS ELECTRIC

COOPERATIVE

1/

Name: Mike Kezar

Title: General Manager

Date: July 5,2018

LCRA TRANSMISSION SERVICES

CORPORATION

Name: Sergio Garza, P.E.

Title: LCRA Vice President, Transmission Design

and Protection

Date: JUNE 21, 2018



STEC/LCRA Amendment 2018

1. Name: Bakersfield

- 2. <u>Point of Interconnection location:</u> The Point of Interconnection is located in Bakersfield Substation in Pecos County, Texas. There is one (1) Point of Interconnection at the Bakersfield Substation generally described as:
 - where STEC's 345 kV transmission line terminates on the Corporation's Bakersfield Substation transmission line dead-end structure.
- 3. <u>Delivery Voltage</u>: 345kV
- 4. <u>Metered Voltage</u>: Not applicable.
- 5. Normal closed: Yes
- 6. One-Line Diagram Attached: Yes
- 7. Facilities owned by STEC:

STEC owns the single-circuit 345 kV transmission line (double-circuit capable) from the Bakersfield Substation to the Cedar Canyon Switchyard, including bundled 1590 ACSR conductors, OPGW shielding, and OPGW splices along the transmission line, transmission line structures and rights-of-way. STEC owns their transmission line dead-end insulator string and attachment hardware connecting to the Corporation's substation dead-end structure. STEC does not own any substation equipment at Bakersfield Substation.

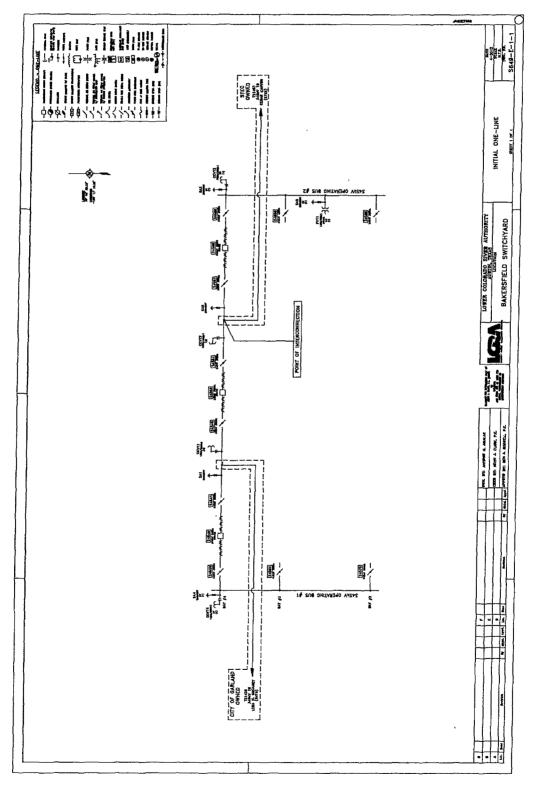
- 8. Facilities owned by the Corporation: The Corporation owns the Bakersfield Substation, including the 345 kV buses, 345 kV circuit breakers, 345 kV switches, 345 kV line switches, 345kV line surge arrestors at substation dead-end structure for the STEC 345 kV line, 345 kV instrument transformers, protection and control panels for the STEC 345 kV line, Remote Terminal Unit, communication electronics, and jumpers from the substation equipment to the STEC 345 kV transmission line at the Point of Interconnection. The Corporation owns all the substation equipment for the STEC 345 kV transmission line. The Corporation provides and owns the fiber patch panel, the fiber facility entry cable, and the fiber splice box within the Bakersfield Substation for the STEC fiber.
- Cost Responsibility: Each Party will be fully responsible for the liabilities related to the facilities it owns. STEC and the Corporation will each be responsible for all costs it incurs in connection with establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule. The Corporation will have full use of the STEC transmission line fiber for transmission utility related purposes and STEC will not charge the Corporation for the use of the STEC transmission line fiber optics.

10. Operational and Maintenance Responsibility: Each Party will be responsible for the operation and maintenance of the facilities it owns, with exception to the fiber splices along the line which may also be maintained by the Corporation at no cost to STEC. The joint maintenance of the fiber is to aid in timely repair to return the fiber to operational status.

11. Supplemental terms and conditions:

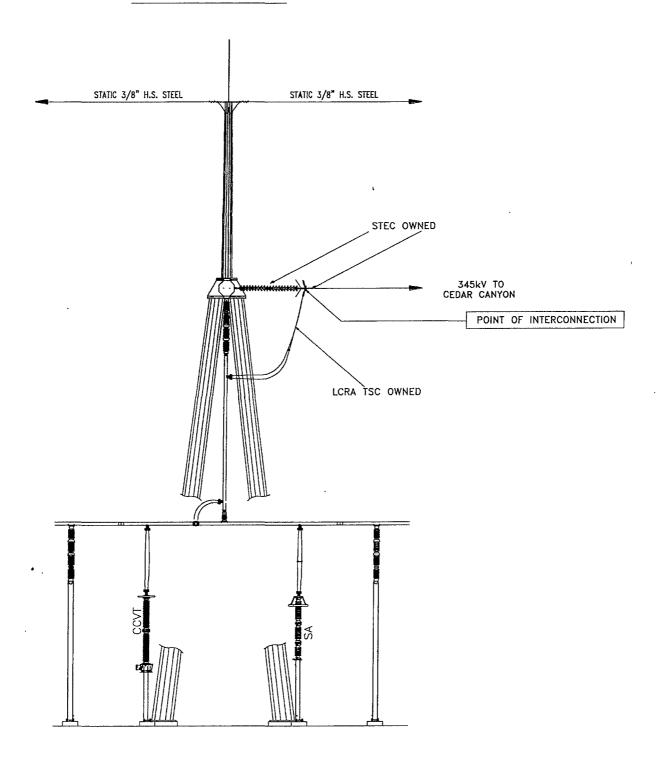
- (a) The Corporation will monitor the STEC 345 kV transmission line flows and other facilities at the Bakersfield Substation.
- (b) The Corporation will provide ICCP data from the Bakersfield Substation to ERCOT in accordance with ERCOT requirements.
- (c) STEC will provide the 345 kV transmission line design parameters and modeling information to the Corporation and to ERCOT, including the Facility Rating of the STEC line from 20 to 115 degrees Fahrenheit ambient temperature in five degree increments for Normal, Two-Hour, and Fifteen-Minute conditions. The Facility Rating of the STEC line will take into consideration the Corporation substation series elements provided by the Corporation.
- (d) The Corporation will install 3000 Amp substation series facilities so that it will not limit the STEC line rating at 105 degrees Fahrenheit ambient. The Corporation will provide the substation series equipment ratings to STEC from 20 to 115 degrees Fahrenheit ambient in five degree increments for Normal, Two-Hour, and Fifteen-Minute conditions.
- (e) The Parties will coordinate on the use of dynamic ratings for the STEC 345 kV line where the dynamic ratings are ambient temperature dependent from 20 to 115 degrees Fahrenheit in five degree increments.
- (f) The Corporation's standard 345 kV transmission line protection schemes will be applied and reviewed with STEC. Any deviations must be mutually agreed upon by STEC and the Corporation. Relay settings will be developed by the Corporation and reviewed with STEC.
- (g) Each Party will name and number their respective equipment.
- (h) Outage scheduling for the STEC 345 kV line will be coordinated through the Corporation's System Operations Control Center, as the Corporation shall direct all switching at the Point of Interconnection and coordinate all switching of the Bakersfield Substation equipment.
- (i) The Corporation will install equipment for distance-to-fault information and will make that information available to STEC for the STEC 345 kV transmission line.
- (j) STEC is responsible for NERC TADS reporting for their 345 kV line.

FACILITY SCHEDULE NO. 4 ONE LINE DIAGRAM STEC/LCRA Amendment 2018



LCRA STC- STEC Amendment 2018

Bakersfield



POINT OF INTERCONNECTION DETAIL

STEC/LCRA Amendment 2018

- 1. Name: Schneeman Draw
- 2. <u>Point of Interconnection location:</u> The Points of Interconnection are located in Schneeman Draw Switchyard in Crockett County, Texas. There are two (2) Points of Interconnection at the Schneeman Draw Switchyard generally described as:
 - where the jumper from the Corporation's substation equipment connects to STEC's Schneeman Draw Switchyard to Noelke Switchyard 345 kV transmission line at the Corporation substation dead end structure.
 - where the jumper from the Corporation's substation equipment connects to STEC's Big Hill Switchyard to Schneeman Draw Switchyard 345 kV transmission line at the Corporation substation dead end structure.
- 3. Delivery Voltage: 345kV
- 4. Metered Voltage: Not applicable.
- 5. Normal closed: Yes
- 6. One-Line Diagram Attached: Yes
- 7. <u>Facilities owned by STEC</u>: STEC owns the single-circuit 345 kV transmission line (double-circuit capable) from the Schneeman Draw Switchyard to the Noelke Switchyard and the single-circuit 345 kV transmission line (double-circuit capable) from Big Hill Substation to the Schneeman Draw Switchyard, including bundled 1590 ACSR conductors, OPGW shielding, and OPGW splices along the transmission line, transmission line structures and rights-of-way. STEC owns their transmission line dead-end insulator string and attachment hardware connecting to the Corporation's substation dead-end structures. STEC does not own any substation equipment at Schneeman Draw Switchyard.
- 8. Facilities owned by the Corporation: The Corporation owns the Schneeman Draw Switchyard, including the 345 kV ring bus, 345 kV circuit breakers, 345 kV switches, 345 kV line switches, 345 kV line surge arrestors at substation dead-end structures for the STEC 345 kV lines, 345 kV instrument transformers, protection and control panels for the STEC 345 kV lines, Remote Terminal Unit, communication electronics, and jumpers from the substation equipment to the STEC 345 kV transmission lines at the Points of Interconnection. The Corporation owns all the substation equipment for the STEC 345 kV transmission lines. The Corporation provides and owns the fiber patch panel(s), the fiber facility entry cable(s), and the fiber splice box(es) within the Schneeman Draw Switchyard for the STEC fiber. The Corporation owns a generator with propane tank (backup station service) and distribution feed (primary station service). The Corporation owns the 36' x 66' control house with batteries, battery charger and other

appurtenances. The Corporation owns the substation property, ground grid, gravel, fencing and other appurtenances.

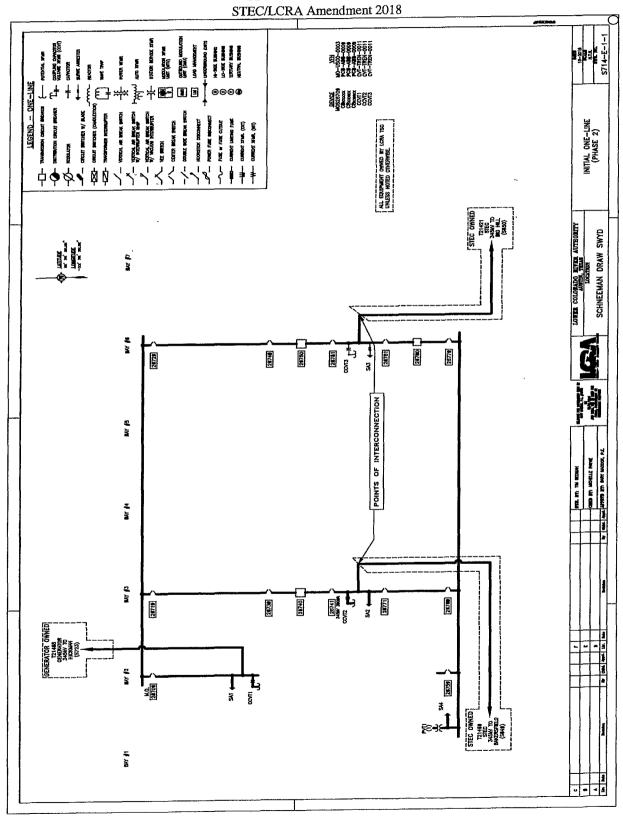
- Ost Responsibility: Each Party will be fully responsible for the liabilities related to the facilities it owns. STEC and the Corporation will each be responsible for all costs it incurs in connection with establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule. The Corporation will have full use of the STEC transmission line fiber for transmission utility related purposes and STEC will not charge the Corporation for the use of the STEC transmission line fiber optics.
- 10. Operational and Maintenance Responsibility: Each Party will be responsible for the operation and maintenance of the facilities it owns, with exception to the fiber splices along the line which may also be maintained by the Corporation at no cost to STEC. The joint maintenance of the fiber is to aid in timely repair to return the fiber to operational status.

11. Supplemental terms and conditions:

- The Corporation will monitor STEC 345 kV transmission line flows and other facilities at the Schneeman Draw Substation.
- The Corporation will provide ICCP data from the Schneeman Draw Switchyard to ERCOT in accordance with ERCOT requirements.
- The Corporation's standard 345 kV transmission line protection schemes will be applied and reviewed with STEC. Any deviations must be mutually agreed upon by STEC and the Corporation. Relay settings will be developed by the Corporation and reviewed with STEC.
- Each Party will name and number their respective equipment.
- Outage scheduling for the STEC 345 kV lines will be coordinated through the Corporation's System Operations Control Center, as the Corporation shall direct all switching at the Points of Interconnection and coordinate all switching of the Schneeman Draw Switchyard equipment.
- STEC is responsible for NERC TADS reporting for their 345 kV lines.
- The Corporation will install 3000 Amp substation series facilities so that it will
 not limit the STEC line rating at 105 degrees Fahrenheit ambient. The
 Corporation will provide the substation series equipment ratings to STEC from 20
 to 115 degrees Fahrenheit ambient in five degree increments for Normal, TwoHour, and Fifteen-Minute conditions.
- The Parties will coordinate on the use of dynamic ratings for the STEC 345 kV line where the dynamic ratings are ambient temperature dependent from 20 to 115 degrees Fahrenheit in five degree increments.

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FACILITY SCHEDULE NO. 13 ONE LINE DIAGRAM



STEC/LCRA Amendment 2018

- 1. Name: Cedar Canyon
- 2. <u>Point of Interconnection location:</u> The Points of Interconnection are located in Cedar Canyon Switchyard in Crockett County, Texas. There are two (2) Points of Interconnection at the Cedar Canyon Switchyard generally described as:
 - where the Corporation's jumper from the Corporation's switchyard equipment connects to STEC's Bakersfield Switchyard to Cedar Canyon Switchyard 345 kV transmission line at the Corporation switchyard dead end structure.
 - where the Corporation's jumper from the Corporation's switchyard equipment connects to STEC's Cedar Canyon Switchyard to Noelke Switchyard 345 kV transmission line at the Corporation switchyard dead end structure.
- 3. Delivery Voltage: 345kV
- 4. Metered Voltage: Not applicable.
- 5. Normal closed: Yes
- 6. One-Line Diagram Attached: Yes
- 7. Facilities owned by STEC: STEC owns the single-circuit 345 kV transmission line (double-circuit capable) from the Bakersfield Switchyard to the Cedar Canyon Switchyard and the single-circuit 345 kV transmission line (double-circuit capable) from Cedar Canyon Switchyard to Noelke Switchyard, including bundled 1590 ACSR conductors, OPGW shielding, and OPGW splices along the transmission line, transmission line structures and rights-of-way. STEC owns their transmission line dead-end insulator string and attachment hardware connecting to the Corporation's switchyard dead-end structures. STEC does not own any switchyard equipment at Cedar Canyon Switchyard.
- 8. Facilities owned by the Corporation: The Corporation owns the Cedar Canyon Switchyard, including the 345 kV ring bus, 345 kV circuit breakers, 345 kV switches, 345 kV line switches, switch motor operators, 345kV line surge arrestors at switchyard dead-end structures for the STEC 345 kV lines, 345 kV coupling capacitor voltage transformers, protection and control panels for the STEC 345 kV lines, Remote Terminal Unit, communication electronics, and jumpers from the switchyard equipment to the STEC 345 kV transmission lines at the Points of Interconnection. The Corporation owns all the switchyard equipment for the STEC 345 kV transmission lines. The Corporation provides and owns the fiber patch panel(s), the fiber facility entry cable(s), and the fiber splice box(es) within the Cedar Canyon Switchyard for the STEC fiber. The Corporation owns a power voltage transformer (primary station service) and distribution feed (backup station service). The Corporation owns the 36' x 66' control house

with batteries, battery charger and other appurtenances. The Corporation owns the switchyard property, ground grid, gravel, fencing and other appurtenances.

- Cost Responsibility: Each Party will be fully responsible for the liabilities related to the facilities it owns. STEC and the Corporation will each be responsible for all costs it incurs in connection with establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule. The Corporation will have full use of the STEC transmission line fiber for transmission utility related purposes and STEC will not charge the Corporation for the use of the STEC transmission line fiber optics.
- 10. Operational and Maintenance Responsibility: Each Party will be responsible for the operation and maintenance of the facilities it owns, with the exception of the fiber splices along the line which may also be maintained by the Corporation at no cost to STEC. The joint maintenance responsibility of the fiber is to aid in timely repair to return the fiber to operational status.

12. Supplemental terms and conditions:

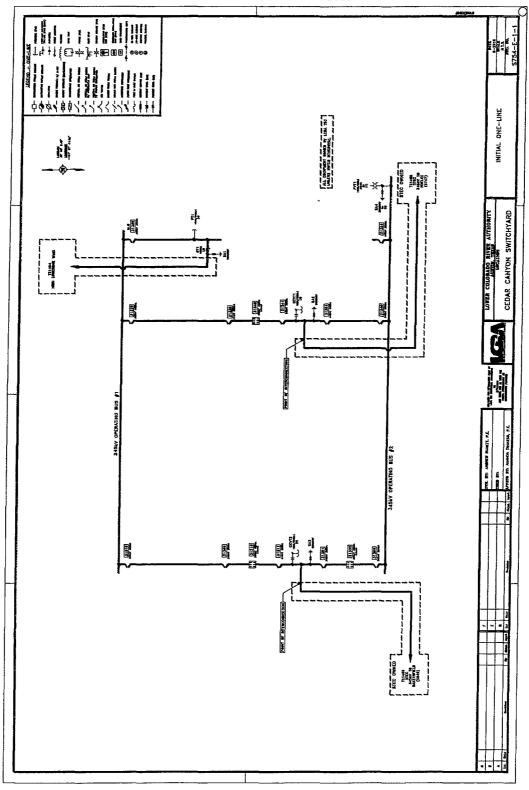
- The Corporation will monitor STEC 345 kV transmission line flows and other facilities at the Cedar Canyon Switchyard.
- The Corporation will provide ICCP data from the Cedar Canyon Switchyard to ERCOT in accordance with ERCOT requirements.
- The Corporation's standard 345 kV transmission line protection schemes will be applied and reviewed with STEC. Any deviations must be mutually agreed upon by STEC and the Corporation. Relay settings will be developed by the Corporation and reviewed with STEC.
- Each Party will name and number their respective equipment.
- Outage scheduling for the STEC 345 kV lines will be coordinated through the Corporation's System Operations Control Center, as the Corporation shall direct all switching at the Points of Interconnection and coordinate all switching of the Cedar Canyon Switchyard equipment.
- STEC is responsible for NERC TADS reporting for their 345 kV lines.
- The Corporation will install 3000 Amp switchyard series facilities so that it will
 not limit the STEC line rating at 105 degrees Fahrenheit ambient. The
 Corporation will provide the switchyard series equipment ratings to STEC from
 20 to 115 degrees Fahrenheit ambient in five degree increments for Normal, TwoHour, and Fifteen-Minute conditions.
- The Parties will coordinate on the use of dynamic ratings for the STEC 345 kV line where the dynamic ratings are ambient temperature dependent from 20 to 115 degrees Fahrenheit in five degree increments.
- This Facility Schedule is dependent on the ERCOT Standard Generation Interconnection Agreement (SGIA) between the Corporation and generator associated with GINR 19INR0038 the Parties agree to amend this Agreement should the generator not complete its project.
- Corporation recognizes that STEC is installing the facilities described in Section 7 of this Facility Schedule to facilitate Corporation's request for the new Points of

Interconnection identified in Section 2 of this Facility Schedule. If Corporation cancels its request for these Points of Interconnection prior to energizing the Points of Interconnection or if Corporation terminates the Points of Interconnection because the facilities are not required, Corporation agrees to pay the actual installed costs incurred and committed to be incurred by STEC, and the actual costs of removal of the STEC material and equipment, that STEC determines cannot be recovered through transmission cost of service rates. The total installed cost of the STEC facilities described hereinabove is estimated to be Two Million dollars (\$2,000,000) which Corporation agrees is reasonable.

• The Parties agree to make the necessary modifications to their respective systems to interconnect the generator by a September 1, 2019 in-service date.

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FACILITY SCHEDULE NO. 17 ONE LINE DIAGRAM STEC/LCRA Amendment 2018



LCRA STC- STEC Amendment 2018

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STEC/LCRA Amendment 2018

- 1. Name: Noelke
- 2. <u>Point of Interconnection location:</u> The Points of Interconnection are located in Noelke Switchyard in Crockett County, Texas. There are two (2) Points of Interconnection at the Noelke Switchyard generally described as:
 - where the Corporation's jumper from the Corporation's switchyard equipment connects to STEC's Cedar Canyon Switchyard to Noelke Switchyard 345 kV transmission line at the Corporation switchyard dead end structure.
 - where the Corporation's jumper from the Corporation's switchyard equipment connects to STEC's Noelke Switchyard to Schneeman Draw Switchyard 345 kV transmission line at the Corporation switchyard dead end structure.
- 3. <u>Delivery Voltage</u>: 345kV
- 4. <u>Metered Voltage</u>: Not applicable.
- 5. Normal closed: Yes
- 6. One-Line Diagram Attached: Yes
- 7. <u>Facilities owned by STEC</u>: STEC owns the single-circuit 345 kV transmission line (double-circuit capable) from the Cedar Canyon Switchyard to the Noelke Switchyard and the single-circuit 345 kV transmission line (double-circuit capable) from Noelke Switchyard to Schneeman Draw Switchyard, including bundled 1590 ACSR conductors, OPGW shielding, and OPGW splices along the transmission line, transmission line structures and rights-of-way. STEC owns their transmission line dead-end insulator string and attachment hardware connecting to the Corporation's switchyard dead-end structures. STEC does not own any switchyard equipment at Noelke Switchyard.
- 8. Facilities owned by the Corporation: The Corporation owns the Noelke Switchyard, including the 345 kV ring bus, 345 kV circuit breakers, 345 kV switches, 345 kV line switches, switch motor operators, 345kV line surge arrestors at switchyard dead-end structures for the STEC 345 kV lines, 345 kV coupling capacitor voltage transformers, protection and control panels for the STEC 345 kV lines, Remote Terminal Unit, communication electronics, and jumpers from the switchyard equipment to the STEC 345 kV transmission lines at the Points of Interconnection. The Corporation owns all the switchyard equipment for the STEC 345 kV transmission lines. The Corporation provides and owns the fiber patch panel(s), the fiber facility entry cable(s), and the fiber splice box(es) within the Noelke Switchyard for the STEC fiber. The Corporation owns a power voltage transformer (primary station service) and distribution

feed (backup station service). The Corporation owns the 36' x 66' control house with batteries, battery charger and other appurtenances. The Corporation owns the switchyard property, ground grid, gravel, fencing and other appurtenances.

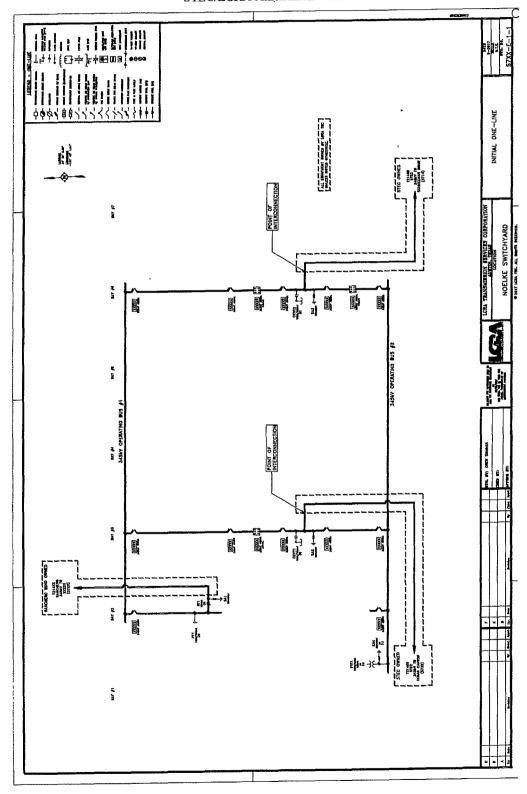
- Ost Responsibility: Each Party will be fully responsible for the liabilities related to the facilities it owns. STEC and the Corporation will each be responsible for all costs it incurs in connection with establishment and maintenance of the Point of Interconnection in accordance with this Facility Schedule. The Corporation will have full use of the STEC transmission line fiber for transmission utility related purposes and STEC will not charge the Corporation for the use of the STEC transmission line fiber optics.
- 10. Operational and Maintenance Responsibility: Each Party will be responsible for the operation and maintenance of the facilities it owns, with the exception of the fiber splices along the line which may also be maintained by the Corporation at no cost to STEC. The joint maintenance responsibility of the fiber is to aid in timely repair to return the fiber to operational status.

13. Supplemental terms and conditions:

- The Corporation will monitor STEC 345 kV transmission line flows and other facilities at the Noelke Switchyard.
- The Corporation will provide ICCP data from the Noelke Switchyard to ERCOT in accordance with ERCOT requirements.
- The Corporation's standard 345 kV transmission line protection schemes will be applied and reviewed with STEC. Any deviations must be mutually agreed upon by STEC and the Corporation. Relay settings will be developed by the Corporation and reviewed with STEC.
- Each Party will name and number their respective equipment.
- Outage scheduling for the STEC 345 kV lines will be coordinated through the Corporation's System Operations Control Center, as the Corporation shall direct all switching at the Points of Interconnection and coordinate all switching of the Cedar Canyon Switchyard equipment.
- STEC is responsible for NERC TADS reporting for their 345 kV lines.
- The Corporation will install 3000 Amp switchyard series facilities so that it will
 not limit the STEC line rating at 105 degrees Fahrenheit ambient. The
 Corporation will provide the switchyard series equipment ratings to STEC from
 20 to 115 degrees Fahrenheit ambient in five degree increments for Normal, TwoHour, and Fifteen-Minute conditions.
- The Parties will coordinate on the use of dynamic ratings for the STEC 345 kV line where the dynamic ratings are ambient temperature dependent from 20 to 115 degrees Fahrenheit in five degree increments.
- This Facility Schedule is dependent on the ERCOT Standard Generation Interconnection Agreement (SGIA) between the Corporation and generator associated with GINR 20INR0011 the Parties agree to amend this Agreement should the generator not complete its project.

- Corporation recognizes that STEC is installing the facilities described in Section 7 of this Facility Schedule to facilitate Corporation's request for the new Points of Interconnection identified in Section 2 of this Facility Schedule. If Corporation cancels its request for these Points of Interconnection prior to energizing the Points of Interconnection or if Corporation terminates the Points of Interconnection because the facilities are not required, Corporation agrees to pay the actual installed costs incurred and committed to be incurred by STEC, and the actual costs of removal of the STEC material and equipment, that STEC determines cannot be recovered through transmission cost of service rates. The total installed cost of the STEC facilities described hereinabove is estimated to be Two Million dollars (\$2,000,000) which Corporation agrees is reasonable.
- The Parties agree to make the necessary modifications to their respective systems to interconnect the generator by a March 31, 2019 in-service date.
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FACILITY SCHEDULE NO. 18 ONE LINE DIAGRAM STEC/LCRA Amendment 2018



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