



Control Number: 35077



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Addendum StartPage: 0

**Project No. 35077**

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**INTERCONNECTION AGREEMENT**

**Between**

**Pedernales Electric Cooperative, Inc.**

**and**

**LCRA Transmission Services Company**

**April 22, 2010**

**INTERCONNECTION AGREEMENT**  
**BETWEEN**  
**PEDERNALES ELECTRIC COOPERATIVE, INC.**  
**AND**  
**LCRA TRANSMISSION SERVICES CORPORATION**

**DATED:** April 12, 2010

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**INTERCONNECTION AGREEMENT  
BETWEEN  
PEDERNALES ELECTRIC COOPERATIVE, INC.  
AND  
LCRA TRANSMISSION SERVICES CORPORATION**

This Agreement is made and entered into this 12<sup>th</sup> day of April, 2010, by and between the Pedernales Electric Cooperative, Inc. ("PEC") and LCRA Transmission Services Corporation, a nonprofit affiliated company of the Lower Colorado River Authority, a conservation and reclamation district of the State of Texas ("LCRA TSC") each sometimes hereinafter referred to individually as "Party" or both referred to collectively as "Parties".

**WITNESSETH**

WHEREAS, each Party is the owner and operator of transmission and/or distribution facilities and is engaged in the business of transmitting electric energy to the general public within the Electric Reliability Council of Texas; and

WHEREAS, the Parties desire to interconnect their respective transmission and/or distribution systems in the respects, and under the terms and conditions set forth below.

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

**ARTICLE I – EFFECTIVE DATE AND TERM**

1.1 This Agreement and any subsequent addendum to this Agreement shall become effective on the date of execution by both Parties. Unless otherwise mutually agreed, this Agreement shall remain in effect initially for a period of five (5) years from the effective date, and shall continue in effect thereafter for periods of two (2) years each unless canceled after such initial period or any subsequent period either by mutual agreement or by either Party upon at least twenty-four (24) months written notice to the other party. Upon termination of this Agreement, each Party shall discontinue the use of the facilities of the other associated with the use of the Points of Interconnection and shall disconnect the Points of Interconnection.

**ARTICLE II – OBJECTIVE AND SCOPE**

2.1 It is the intent of the Parties, by this Agreement, to state the terms and conditions under which the Parties' transmission and/or distribution systems will be interconnected and to identify the facilities and equipment provided by each Party at the points of interconnection between their systems.

2.2 This Agreement shall apply to the ownership, construction, general operation and maintenance of those facilities which are specifically identified and described in the Facility Schedules which are attached hereto and incorporated herein.

2.3 This Agreement, including all attached Facility Schedules, constitutes the entire agreement and understanding between the Parties with regard to the interconnection of the facilities of the Parties at the Points of Interconnection expressly provided for in this Agreement. The Parties are not bound by or liable for any statement, representation, promise, inducement, understanding, or undertaking of any kind or nature (whether written or oral) with regard to the subject matter hereof if not set forth or provided for herein. This Agreement replaces all other agreements and undertakings, oral and written, between the Parties with regard to the subject matter hereof. It is expressly acknowledged that the Parties may have other agreements covering other services not expressly provided for herein; such agreements are unaffected by this Agreement.

2.4 If PEC also takes Transformation Service from LCRA TSC, PEC shall execute a separate agreement for Transformation Service, which shall be attached hereto.

### **ARTICLE III – DEFINITIONS**

For purposes of this Agreement, the following definitions shall apply:

3.1 Agreement shall mean this Agreement with all schedules and attachments applying hereto, including any schedules and attachments hereafter made and any amendments hereafter made.

3.2 ERCOT shall mean the Electric Reliability Council of Texas, Inc., or its successor in function.

3.3 ERCOT Protocols shall mean the documents adopted by ERCOT, and approved by the PUCT, including any attachments or exhibits referenced in the ERCOT Protocols, as amended from time to time, that contain the scheduling, operating, planning, reliability, and settlement (including customer registration) policies, rules, guidelines, procedures, standards, and criteria of ERCOT.

3.4 Facility Schedule(s) shall mean the addendum(s) to this Agreement that describe the agreement on ownership, control, general operation, and maintenance responsibilities of the Parties at the Point(s) of Interconnection.

3.5 Good Utility Practice shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable

practices, methods, or acts generally accepted in the region. Good Utility Practice may include, but not be limited to, conformance with the applicable and consistently applied reliability criteria, standards and operating guides of ERCOT and the NERC, or successor organization(s).

3.6 Metering Location Schedule shall mean the addendum(s) to this Agreement that describe the agreement on ownership of the Parties at metering locations where there are no Point(s) of Interconnection.

3.7 NERC shall mean the North American Electric Reliability Corporation or its successor in function.

3.8 NERC Reliability Standards shall mean the mandatory electric reliability standards enforced by NERC.

3.8 Point(s) of Interconnection shall mean the points where the electrical systems of the Parties are connected or may, by the closure of normally open switches, be connected.

3.9 PUCT shall mean the Public Utility Commission of Texas or its successor in function.

#### **ARTICLE IV – ESTABLISHMENT AND TERMINATION OF POINTS OF INTERCONNECTION**

4.1 The Parties agree to comply with NERC Reliability Standards as they relate to the interconnection of their facilities at the locations identified and described in the Facility Schedules which are attached hereto and incorporated herein.

4.2 The Parties agree to interconnect their facilities at the locations, and in accordance with the terms and conditions, specified in the attached Facility Schedule(s). All Points of Interconnection shall be specified in Exhibit "A" and the Facility Schedule(s) attached hereto and made a part hereof. The Facility Schedule(s) shall specify the responsibilities of the Parties with respect to ownership, control, general operation, and maintenance of the interconnection facilities.

4.3 Unless otherwise provided in a Facility Schedule, each Party shall, at each Point of Interconnection, at its own risk and expense, design, install, or cause the design and installation of the transmission or distribution facilities (including all apparatus and necessary protective devices) on its side of the Point of Interconnection, so as to reasonably minimize the likelihood of voltage and frequency abnormalities, originating in the system of one Party, from affecting or impairing the system of the other Party, or other systems to which the system of such Party is interconnected. The Parties agree that all Points of Interconnection will be established in conformance with operating guidelines of ERCOT and the ERCOT Protocols, as the same may be amended hereafter. The Parties agree to cause their systems to be constructed in accordance with specifications at least equal to those provided by the National Electrical Safety Code, approved by the American National Standards Institute, in effect at the time of construction.

Except as otherwise provided in the Facility Schedules, each Party will be responsible for the equipment and facilities it owns on its side of the Point of Interconnection.

4.4 From time to time, a Point of Interconnection may be added, changed, modified, or deleted from this Agreement as mutually agreed by the Parties (not to be unreasonably withheld) and/or as ordered by a regulatory authority having jurisdiction thereof. Any such change, addition, or deletion shall be recorded in Exhibit A and a Facility Schedule in such a way that the numbering of the other Facility Schedules is not changed. Subject to regulatory approval, if required, either Party may terminate a Point of Interconnection on twelve (12) months advance written notice. Upon termination of a Point of Interconnection, each Party shall discontinue the use of the facilities of the other associated with the use of that Point of Interconnection and shall disconnect from that Point of Interconnection. The Parties agree to use reasonable efforts to coordinate the termination of a Point of Interconnection to minimize any disruption in service to either Party.

4.5 Subject to regulatory approval, if required, unless mutually agreed, neither party shall have the right to disconnect from the other Party at any Point of Interconnection specified on Exhibit A and a Facility Schedule, originally attached to this Agreement or added subsequent to the execution of this Agreement, except as set forth in Section 4.4 above, or for reason of a material violation of the terms of this Agreement, for which opportunity to correct such violation was given under Paragraph 15.1 of this Agreement and such violation was not corrected in accordance with said Paragraph 15.1.

4.6 For facilities not specified in the Facility Schedules, or if either Party makes equipment changes or additions to the equipment at a Point of Interconnection, which may affect the operation or performance of the other Party's interconnection facilities, the Parties agree to notify the other Party, in writing, of such changes. Such changes shall be made in accordance with Good Utility Practice, ERCOT requirements, the National Electrical Safety Code, other applicable codes, and standards in effect at the time of construction, and coordinated between the Parties.

4.7 Each party agrees to provide, upon request, the current as-built drawings to the other Party of the facilities owned by that Party at each Point of Interconnection.

4.8 The Parties agree to coordinate and cooperate on assessments of the reliability impacts to the interconnected transmission system for new facilities requesting connection to their distribution or transmission facilities, in accordance with the NERC Reliability Standards.

4.9 PEC is responsible for reporting annual load data requests to ERCOT as required by the ERCOT Protocols, and the Parties agree to coordinate and cooperate on submitting this report.

## **ARTICLE V - OTHER SERVICES**

5.1 This Agreement is applicable only to the interconnection of the facilities of the Parties at the Points of Interconnection and does not obligate either Party to provide, or entitle



either Party to receive, any service not expressly provided for herein. Each Party is responsible for making the arrangements necessary to receive any other service that either Party may desire from the other Party or any third party.

5.2 All transmission, transformation, distribution, metering, operations, and maintenance, engineering, billing or other miscellaneous services will be provided and charged under agreements separate from this Agreement.

5.3 Each Facility Schedule shall indicate whether transformation and/or metering services apply at each Point of Interconnection. Parties agree that the name and location of the Points of Interconnection in the Exhibit "A" and the Facilities Schedules attached to this Agreement, will be identical to the name used and the location of the corresponding facilities in the Transformation Service Agreement.

## **ARTICLE VI - SYSTEM OPERATION AND MAINTENANCE**

6.1 Unless otherwise provided by the Facility Schedules, each Party shall, at each Point of Interconnection, at its own risk and expense, operate and maintain the facilities (including all apparatus and necessary protective devices) it owns or hereafter may own, so as to reasonably minimize the likelihood of voltage and frequency abnormalities, originating in the system of one Party, from affecting or impairing the system of the other Party, or other systems to which the Party is interconnected. The Parties agree that all Points of Interconnection will be operated and maintained in conformance with the ERCOT Protocols, as the same may be amended hereafter.

6.2 Operational responsibility for facilities owned by one Party, but installed in another Party's substation or transmission line will be identified in the Facility Schedule for that particular Point of Interconnection.

6.3 During the term of this Agreement, the Parties will, consistent with maintaining good operating practices, coordinate their operations to maintain continuity of services to their respective customers to the extent practicable. Planned facility maintenance by either Party that will cause a deviation from the normal power and energy flow at a Point of Interconnection will be scheduled at a mutually agreeable time. Except as otherwise permitted by the terms of this Agreement, no changes will be made in the normal operation of a Point of Interconnection without the mutual agreement of the Parties. The Parties will, to the extent necessary to support continuity of operations, coordinate the operation of protective devices on the facilities they operate in the proximity of the Points of Interconnection which might reasonably be expected to affect the operation of facilities on the other Party's system.

6.4 Each Party will provide the reactive requirements for its own system in accordance with the ERCOT Protocols. Each Party will provide the reactive requirements for its own system so as not to impose a burden on the other system.

## **ARTICLE VII - RIGHTS OF ACCESS, EQUIPMENT INSTALLATION, AND REMOVAL**

7.1 Each Party shall permit duly authorized representatives and employees of the other Party to enter upon its premises for the purpose of inspecting, testing, repairing, renewing, or exchanging any or all of the equipment owned by such other Party that is located on such premises or for the purpose of performing any work necessary in the performance of this Agreement.

7.2 Each Party grants to the other Party permission to install, maintain, and/or operate, or cause to be installed, maintained, and/or operated, on its premises, the necessary equipment, apparatus, and devices required for the performance of this Agreement. Any such installation, maintenance, and operation to be performed, except in the case of emergencies, shall be performed only after a schedule of such activity has been submitted and agreed upon by the Parties.

7.3 Any and all equipment, apparatus, and devices placed or installed, or caused to be placed or installed by one Party on, or in, the premises of the other Party, shall be and remain the property of the Party owning and installing such equipment, apparatus, devices, or facilities, regardless of the mode and manner of annexation or attachment to real property. Upon the termination of any Point of Interconnection under this Agreement, the Party owning and installing such equipment, apparatus, devices, or facilities on the property of the other Party, shall 1) have the right to sell such equipment, apparatus, devices, or facilities to the other Party if the other Party wishes to purchase such equipment, apparatus, devices, or facilities or 2) to enter the premises of the other Party and, within a reasonable time, remove such equipment, apparatus, devices, or facilities, at no cost to the owner of the premises. If, upon the termination of any Point of Interconnection under this Agreement, equipment of a Party that is installed on the premises of the other Party is either not sold to the other Party or removed by the owning Party within a reasonable time, it shall be considered abandoned by the owning Party and may be disposed of by the other Party in the manner it shall determine appropriate; provided, however, that any net cost incurred by the disposing Party shall be reimbursed by the abandoning party.

7.4 Each Party shall clearly mark their respective equipment, apparatus, devices, or facilities with appropriate ownership identification, as practical.

7.5 Either Party may request the other Party to upgrade or modify its terminal facilities at a Point of Interconnection in accordance with the other Party's standard design of equipment, provided that the upgrade or modification is consistent with Good Utility Practice and, if applicable, is approved by the Regional Planning Group of ERCOT. The requesting Party shall provide the responsive Party a minimum of twenty-four (24) months notice of the upgrade or modification of its terminal facilities at a Point of Interconnection, absent mutual acceptance of a shorter notice period. The Parties agree to use reasonable efforts to coordinate the upgrade or modification of terminal facilities at a Point of Interconnection to minimize any disruption in service to either Party.

## **ARTICLE VIII – METERING AND RECORDS**

8.1 All metering equipment required herein shall be selected, installed, tested, operated, and maintained by the Party owning such metering equipment in accordance with Good Utility Practice and the ERCOT Protocols.

8.2 The Party that does not own the metering equipment shall be permitted to witness any testing, inspection, maintenance, or alteration of such metering equipment owned by the other Party. The owner of such equipment shall give reasonable advance notice of all tests and inspections so that representatives of the other Party may be present. After proper notification to the other Party, the owner may proceed with the scheduled tests or inspections regardless of whether a witness is present.

8.3 If any test or inspection of metering equipment shows that it does not meet the accuracy requirements established by the ERCOT Protocols, the meter or other equipment found to be inaccurate or defective shall be promptly repaired, adjusted, or replaced by the owner. Should metering equipment fail to register, the power and energy delivered and received shall be determined in accordance with the ERCOT Protocols.

## **ARTICLE IX – COMMUNICATION AND TELEMETERING FACILITIES**

9.1 Each Party shall provide, at its own expense, the necessary communication and telemetering facilities needed for the control and operation of its transmission and/or distribution system.

9.2 All communication and telemetering facilities required herein shall be selected, installed, tested, operated, and maintained by the Party owning such equipment in accordance with Good Utility Practice and the ERCOT Protocols.

## **ARTICLE X - INDEMNIFICATION**

10.1 EACH PARTY SHALL ASSUME ALL LIABILITY FOR, AND SHALL INDEMNIFY, DEFEND, AND SAVE HARMLESS THE OTHER PARTY, ITS DIRECTORS, OFFICERS, AND AGENTS (INCLUDING, BUT NOT LIMITED TO, DIRECTORS, OFFICERS, AND EMPLOYEES OF ITS AFFILIATES AND CONTRACTORS) FROM ANY AND ALL DAMAGES, LOSSES, CLAIMS, INCLUDING CLAIMS AND ACTIONS RELATING TO INJURY TO OR DEATH OF ANY PERSON (INCLUDING THE EMPLOYEES OF THE INDEMNIFIED PARTY) OR DAMAGE TO PROPERTY (INCLUDING PROPERTY OF THE INDEMNIFIED PARTY) DEMANDS, SUITS, RECOVERIES, COSTS AND EXPENSES, COURT COSTS, ATTORNEY FEES, AND ALL OTHER OBLIGATIONS BY OR TO THIRD PARTIES, ARISING OUT OF OR RESULTING FROM NEGLIGENCE OR OTHER FAULT IN THE DESIGN, CONSTRUCTION, OR OPERATION OF THEIR RESPECTIVE FACILITIES, DURING THE PERFORMANCE OF THIS AGREEMENT AND TO THE EXTENT PERMITTED BY LAW, EXCEPT IN CASES OF NEGLIGENCE OR INTENTIONAL WRONGDOING BY THE OTHER PARTY.

## **ARTICLE XI –NOTICES**

11.1 Notices of an administrative nature, including but not limited to a notice of termination, a request for amendment, a change to a Point of Interconnection, or a request for a new Point of Interconnection, shall be forwarded to the designees listed below for each Party and shall be deemed properly given if delivered in writing to the following:

- (a) PEDERNALES ELECTRIC COOPERATIVE, INC.  
System Engineering Manager  
P.O. Box 1  
201 S. Avenue F  
Johnson City, TX 78636-0001
- (b) LCRA TRANSMISSION SERVICES CORPORATION  
Manager, Transmission Engineering  
LCRA Transmission Services Corporation  
P.O. Box 220  
Austin, TX 78767-0220

11.2 The above listed names, titles, and addresses of either Party may be changed upon written notification to the other Party.

## **ARTICLE XII - SUCCESSORS AND ASSIGNS**

12.1 Subject to the provisions of Section 12.2 below, this Agreement shall be binding upon and inure to the benefit of the permitted successors and assigns of the respective Parties.

12.2 Neither Party shall assign its interest in this Agreement in whole or in part without the prior written consent of the other Party. Such consent shall not be unreasonably withheld, provided that neither Party will be required to consent to any assignment which would, in its sole judgment and among other reasons, subject it to additional federal or state regulation, result in the imposition of additional costs of administration which the Party requesting assignments does not agree to reimburse, or in any way diminish the reliability of its system, enlarge its obligations or otherwise create or maintain an unacceptable condition. The respective obligations of the Parties under this Agreement may not be changed, modified, amended, or enlarged, in whole or in part, by reason of the sale, merger, or other business combination of either Party with any other person or entity. Notwithstanding the foregoing, a Party may assign, without the consent of the other Party, its interest in this Agreement, in whole or in part (1) to a successor to all or a substantial portion of the Party's transmission and distribution business; or (2) for collateral security purposes in connection with any financing or financial arrangements.

12.3 The several provisions of this Agreement are not intended to and shall not create rights of any character whatsoever in favor of any persons, corporations, or associations other than the Parties to this Agreement, and the obligations herein assumed are solely for the use and benefit of the Parties to this Agreement.

### **ARTICLE XIII – GOVERNING LAW AND REGULATION**

13.1 This Agreement was executed in the State of Texas and must in all respects be governed by, interpreted, construed, and enforced in accordance with the laws thereof except as to matters exclusively controlled by the Constitution and statutes of the United States of America. This Agreement is subject to all valid applicable federal, state, and local laws, ordinances, rules and regulations of duly constituted regulatory authorities having jurisdiction.

13.2 This Agreement and all obligations hereunder, are expressly conditioned upon obtaining approval or authorization or acceptance for filing by any regulatory body, whose approval, authorization or acceptance for filing is required by law. Both Parties hereby agree to support the approval of this Agreement before such regulatory authority and to provide such documents, information, and opinions as may be reasonably required or requested by either Party in the course of approval proceedings.

13.3 In the event that a regulatory authority having jurisdiction over the Parties orders a change in the terms of this Agreement, the Parties agree to negotiate in good faith a replacement term that will most nearly accomplish the purpose and intent of the original term consistent with the regulatory order. If the Parties cannot reach an agreement over the new term and if the old term is an essential provision of this Agreement, either Party may elect to terminate this Agreement, by providing notice of such election to the other upon sixty (60) days prior written notice to the other Party. An election to terminate under this provision shall not affect either Party's duty to perform prior to the effective date of termination.

13.4 In the event any part of this Agreement is declared invalid by a court of competent jurisdiction, the remainder of said Agreement shall remain in full force and effect and shall constitute a binding agreement between the Parties provided, however, that if either Party determines, in its sole discretion, that there is a material change in this Agreement by reason of any provision or application being finally determined to be invalid, illegal, or unenforceable, that Party may terminate this Agreement upon sixty (60) days prior written notice to the other Party. An election to terminate under this provision shall not affect either Party's duty to perform prior to the effective date of termination.

### **ARTICLE XIV – DEFAULT AND FORCE MAJEURE**

14.1 Neither Party shall be considered in default with respect to any obligation hereunder, other than the payment of money, if prevented from fulfilling such obligations by reason of any cause beyond its reasonable control, including, but not limited to, outages or interruptions due to weather, accidents, equipment failures or threat of failure, strikes, civil unrest, injunctions or order of governmental authority having jurisdiction ("Force Majeure"). If performance by either Party has been prevented by such event, the affected Party shall promptly and diligently attempt to remove the cause of its failure to perform, except that neither Party shall be obligated to agree to any quick settlement of any strike or labor disturbance, which, in the affected Party's opinion, may be inadvisable or detrimental, or to appeal from any administrative or judicial ruling.

## **ARTICLE XV - TERMINATION ON DEFAULT**

15.1 The term "Default" shall mean the failure of either Party to perform any obligation in the time or manner provided in this Agreement. No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in Section 14.1 of this Agreement or the result of an act or omission of the other Party. Upon a Default, the non-defaulting Party shall give written notice of such Default to the defaulting Party. Except as provided in Section 15.2, the defaulting Party shall have thirty (30) days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within thirty (30) days, the defaulting Party shall commence such cure within thirty (30) days after notice and continuously and diligently complete such cure within ninety (90) days from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

15.2 If a Default is not cured as provided in this Section, or if a Default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Section will survive termination of this Agreement.

15.3 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of this Agreement will not be considered to waive the obligations, rights, or duties imposed upon the Parties by this Agreement.

## **ARTICLE XVI- MISCELLANEOUS PROVISIONS**

16.1 Any undertaking by a Party to the other Party under this Agreement shall not constitute the dedication of the electrical system or any portion thereof of that Party to the public or to the other Party, and it is understood and agreed that any such undertaking shall cease upon the termination of this Agreement.

16.2 **IN NO EVENT SHALL EITHER PARTY BE LIABLE UNDER ANY PROVISION OF THIS AGREEMENT FOR ANY LOSSES, DAMAGES, COSTS OR EXPENSES FOR ANY SPECIAL, INDIRECT, INCIDENTAL, CONSEQUENTIAL, OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFIT OR REVENUE, LOSS OF THE USE OF EQUIPMENT, COST OF CAPITAL, COST OF TEMPORARY EQUIPMENT OR SERVICES, WHETHER BASED IN WHOLE OR IN PART IN CONTRACT, IN TORT, INCLUDING NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER THEORY OF LIABILITY; PROVIDED, HOWEVER, THAT DAMAGES FOR WHICH A PARTY MAY BE LIABLE TO THE OTHER PARTY UNDER ANOTHER AGREEMENT WILL NOT BE CONSIDERED TO BE SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES HEREUNDER.**

16.3 This Agreement shall not affect the obligations or rights of either Party with respect to other agreements. Both Parties to this Agreement represent that there is no agreement or other obligation binding upon it, which, as such Party is presently aware, would limit the effectiveness or frustrate the purpose of this Agreement.

16.4 This Agreement may be amended only upon mutual agreement of the Parties, which amendment will not be effective until reduced in writing and executed by the Parties.

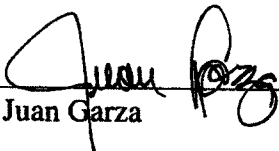
16.5 The descriptive headings of the various sections of this Agreement have been inserted for convenience of reference only and are to be afforded no significance in the interpretation or construction of this Agreement.

16.6 This Agreement will be executed in two or more counterparts, each of which is deemed an original, but all constitute one and the same instrument.

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IN WITNESS WHEREOF, the Parties have caused this Interconnection Agreement between LCRA Transmission Service Corporation and Pedernales Electric Cooperative, Inc. to be executed in two (2) counterparts, each of which shall constitute an original, on the day and year first written above.

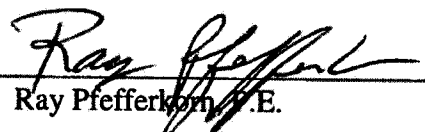
**PEDERNALES ELECTRIC COOPERATIVE, INC.**

By:   
Juan Garza

Title: General Manager

Date: February 23, 2010

**LCRA TRANSMISSION SERVICES CORPORATION**

By:   
Ray Pfefferkorn, P.E.

Title: LCRA Transmission Engineering Manager

Date: 4/12/10





## EXHIBIT A

<b>FACILITY SCHEDULE NO.</b>	<b>LOCATION OF POINT(S) OF INTERCONNECTION (# of Points)</b>	<b>INTERCONNECTION VOLTAGE (KV)</b>	<b>EFFECTIVE DATE OF INTERCONNECTION</b>
1	Andice (2)	138 kV	
2	Antler (2)	138 kV	
3	Avery Ranch (2)	138 kV	
4	Bee Creek (2)	138 kV	
5	Bergheim (4)	138 kV	
6	Buda Split (1)	138 kV	
7	Burnet (4)	12.5/69/138 kV	
8	Buttercup (2)	138 kV	
9	Camp Gary (9)	12.5 kV	
10	Canyon (1)	138 kV	
11	Copperas Cove (1)	138 kV	
12	E. Babe Smith (1)	138 kV	
13	Escarpment (2)	138 kV	
14	Fairland (2)	138 kV	
15	Fairoaks (2)	138 kV	
16	Friendship (2)	138 kV	
17	Gabriel (1)	138 kV	
18	Glasscock (9)	24.9 kV	
19	Goforth (2)	138 kV	
20	Granite Mountain (2)	138 kV	
21	Graphite Mine (1)	138 kV	
22	Horseshoe Bay (2)	138 kV	
23	Inks Dam (4)	12.5 kV	
24	Lago Vista (4)	138 kV	
25	Lakeway (1)	138 kV	
26	Manchaca (2)	138 kV	
27	Marshall Ford (6)	138 kV	
28	Mc Carty Lane East (3)	138 kV	
29	Miller Creek (1)	138 kV	
30	Mountain Top (4)	138 kV	
31	Phillips Johnson City (6)	12.5 kV	
32	River Oaks (1)	138 kV	
33	Rohr (1)	138 kV	
34	Segovia (1)	69 kV	
35	Sherwood Shores (2)	138 kV	
36	Spicewood (2)	138 kV	

**(continued)**

[illegible]

## FACILITY SCHEDULE NO. 1

1. **Name:** Andice Substation (PEC)
2. **Facility Location:** The Andice Substation is located at 6600 N. Hwy. 183, Andice, Williamson County, Texas 78628.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Andice Substation generally described as:
  - where the 90° terminal connector on the end of the 138 kV bus tubular jumper bolts to the 4 hole pad on switch 10123.
  - where the jumper, from the terminal connector on the end of the 138 kV bus, bolts to the 4 hole pad on switch 10119.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformers are located inside T-1 and in the total bay for T-2. The bus potential transformers are located on both 24.9 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

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

  - 138 kV operating bus including structures, insulators, foundations and jumpers
  - Two (2) 138 kV circuit switchers CS-1475 and CS-10095 with associated bypass switches 1477 and 10097
  - Two (2) 138 kV circuit breakers 10090 and 10110 including foundations, jumpers and protective relay packages
  - Eight (8) 138 kV switches 1474, 10088, 10089, 10091, 10094, 10098, 10109 and 10124
  - One (1) 138 kV bus potential transformer PT-3
  - One (1) 138 kV surge arrester
  - One (1) auto transformer T-3 with associated surge arresters
  - One (1) 69 kV circuit breaker 10100 including foundation, jumper and protective relay package
  - One (1) 69 kV surge arrester
  - One (1) 69 kV bus potential transformer PT-4

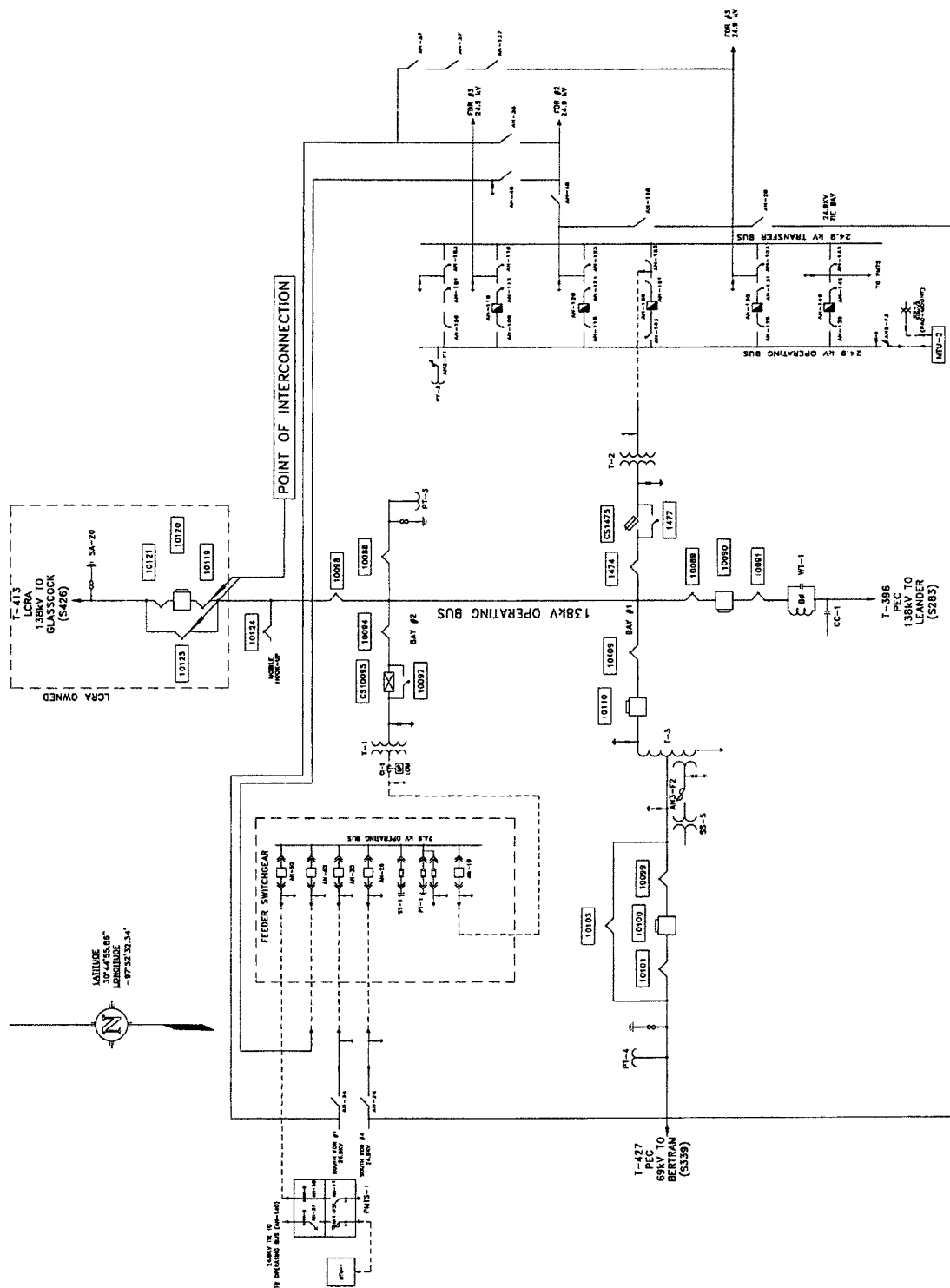
- Three (3) 138 kV switches (operating at 69 kV) 10099, 10101 and 10103
- Two (2) power transformers T-1 and T-2 with associated surge arresters
- One (1) 138 kV coupling capacitor CC-1
- One (1) 138 kV wave trap and tuner WT-1
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution and total circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus, and associated cabling.
- Two (2) 24.9 kV bus potential transformers PT-1 and PT-2 with associated fuses and/or fused disconnect switch.
- One (1) 24.9 kV metering current transformer CT-5 (internal to T-1)
- Two (2) modulation transformers MTU-1 and MTU-2 with associated surge arresters, fused disconnect switches and OMU units.
- One (1) pad mounted transfer switch PMTS-1
- Three (3) 24.9 kV station service SS-1, SS-2 and SS-3 with associated fused disconnect switches
- Control house and battery

LCRA TSC owns:

- A-frame structures, trusses, switch stands, bus supports, buswork, conductors, footings and foundations in 138 kV line bay to Glasscock Substation
- Three (3) 138 kV switches 10119, 10121, 10123
- One (1) 138 kV circuit breaker 10120 including foundation, jumpers and protective relay package
- One (1) 138 kV surge arrester SA-20
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

## ANDICE ONE-LINE DIAGRAM



## ANDICE SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S335-E-0001.

## FACILITY SCHEDULE NO. 2

1. **Name:** Antler Substation (PEC)
2. **Facility Location:** The Antler Substation is located at 32683 Stahl Rd., Bulverde, Comal County, Texas 78163.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Antler Substation generally described as:
  - where the jumper from switch 9404 bolts to the terminal connector on the end of the 138 kV operating bus.
  - where the jumper from switch 12074 bolts to the terminal connector on the end of the 138 kV operating bus.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformers are located inside T-1 and T-2. The bus potential transformers are located on both 24.9 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

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

- Two (2) 138 kV circuit switchers CS-9405 and CS-12075 with associated disconnect and bypass switches 9404, 12074, 9407 and 12077
- Two (2) power transformers T-1 and T-2 with associated surge arresters
- Two (2) 24.9 kV metering current transformers CT-1 and CT-2 (internal to T-1 and T-2)
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus and associated cabling
- Two (2) modulation transformers MTU-1 and MTU-2 with associated surge arresters, fused disconnect switch and OMU units

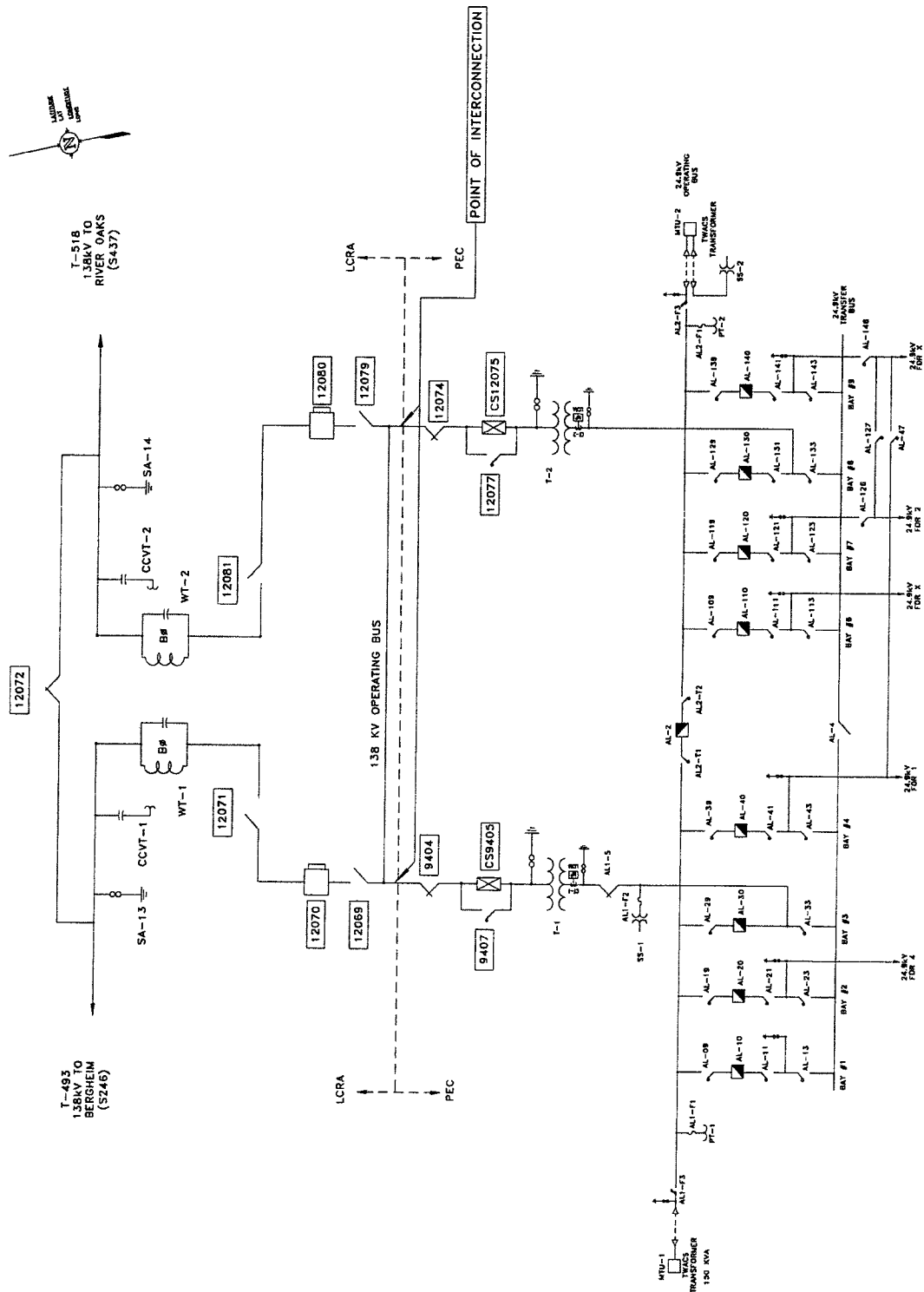
- Two (2) 24.9kV station service SS-1 and SS-2 with associated fused disconnect switch
- Two (2) 24.9kV bus potential transformer PT-1 and PT-2 with associated fused disconnect switch
- Control house and battery

LCRA TSC owns:

- A-frame structures, trusses, switch stands, CCVT stands, bus supports, buswork, conductors, footings and foundations in 138 kV line bay to Bergheim and River Oaks Substations
- 138 kV operating bus including structures, insulators, foundations and jumpers
- Five (5) 138 kV switches 12069, 12071, 12072, 12079 and 12081
- Two (2) 138 kV circuit breakers 12070 and 12080 including foundations, jumpers and protective relay packages (Breaker Control panels)
- Two (1) 138 kV surge arresters SA-13 and SA-14
- Two (2) 138 kV wave traps and tuners WT-1 and WT-2
- Two (2) 138 kV coupling capacitor voltage transformers CCVT-1 and CCVT-2

- 10. Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

# ANTLER ONE-LINE DIAGRAM



ANTLER SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING 5432-E-0003.



### FACILITY SCHEDULE NO. 3

1. **Name:** Avery Ranch Substation (LCRA)
2. **Facility Location:** The Avery Ranch Substation is located at 14125½ Avery Ranch Blvd., Austin, Williamson County, Texas 78717.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Avery Ranch Substation generally described as:
  - where the jumper from switch 10864 attaches to the dead end insulator on the a-frame structure.
  - where the jumper from switch 10854 attaches to the dead end insulator on the a-frame structure.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformers are located inside T-1 and T-2. The bus potential transformers are located on both 24.9 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

  - Two (2) 138kV circuit switchers CS-10855 and CS-10865 with associated disconnect and bypass switches 10854, 10864, 10857 and 10867
  - Two (2) power transformers T-1 and T-2 with associated surge arresters
  - Two (2) 24.9 kV metering current transformers CT-1 and CT-2 (internal to T-1 and T-2)
  - All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
  - All distribution circuit breakers including jumpers, protective relay packages and foundations
  - All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, T-1 and T-2, 24.9 kV operating and transfer buses and associated cabling
  - Two (2) modulation transformers MTU-1 and MTU-2 with associated surge arresters, fused disconnect switches and OMU units
  - Two (2) 24.9 kV station service SS-1 and SS-2 with fused disconnect switches

- Two (2) 24.9 kV bus potential transformers PT-1 and PT-2 with associated fused disconnect switches

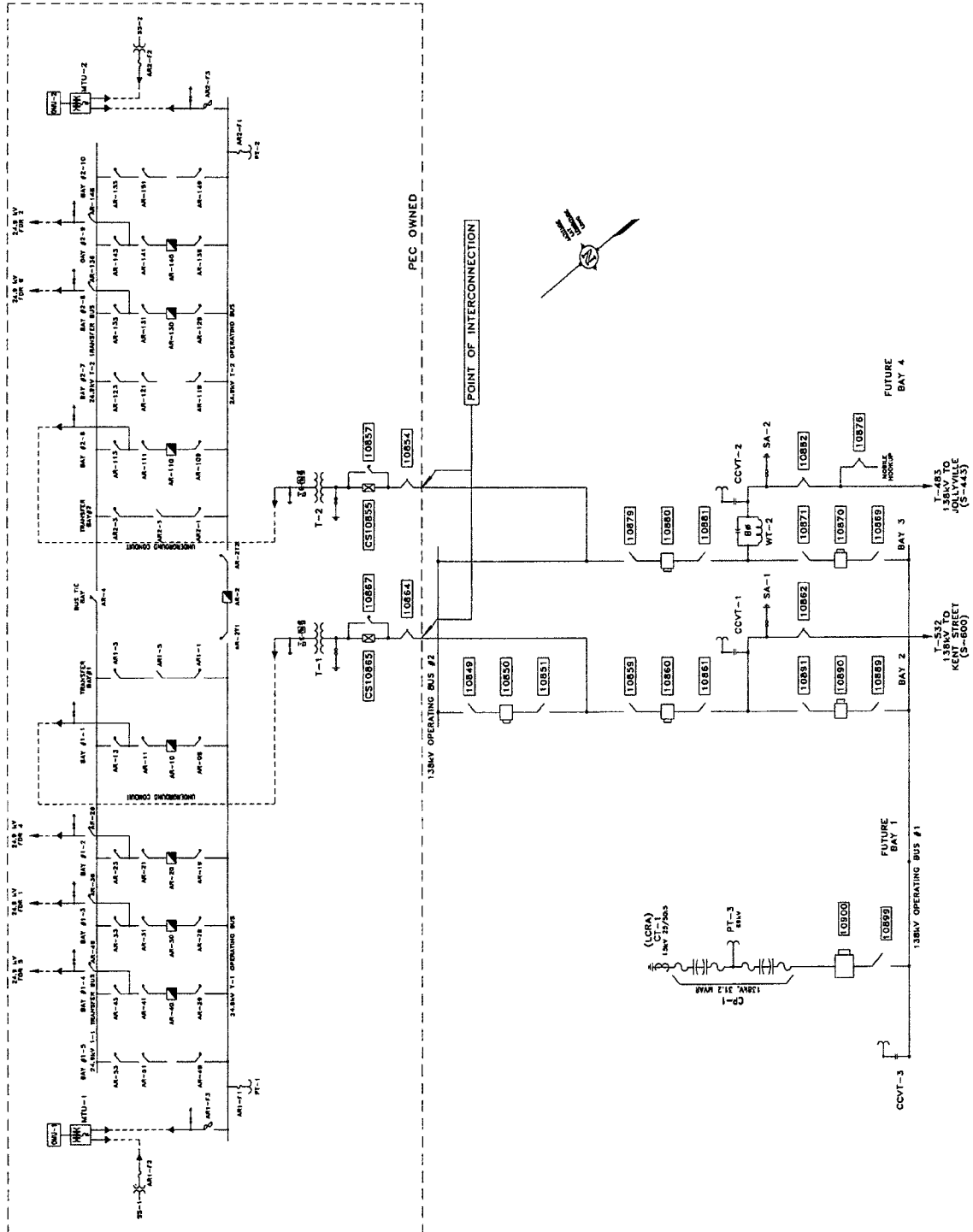
LCRA TSC owns:

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

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV operating bus #1 and #2 including structures, insulators, foundations and jumpers
- Six (6) 138 kV circuit breakers 10850, 10860, 10870, 10880, 10890 and 10900 including foundation, jumpers and protective relay packages
- Fourteen (14) 138 kV switches 10849, 10851, 10859, 10861, 10862, 10869, 10871, 10876, 10879, 10881, 10882, 10889, 10891 and 10899
- Three (3) 138 kV coupling capacitor voltage transformers CCVT-1, CCVT-2 and CCVT-3
- One (1) 138 kV wave trap and tuner WT-2
- Two (2) 138 kV surge arresters SA-1 and SA-2
- One (1) 138 kV capacitor bank CP-1
- One (1) 138 kV capacitor bank 69 kV potential transformer PT-3
- One (1) 15 kV single phase current transformer CT-1
- Control house and battery bank

- 10. Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

# AVERY RANCH ONE-LINE DIAGRAM



AVERY RANCH SUBSTATION  
 THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
 FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
 SUBSTATION, REFER TO DRAWING 5494-E-0001.

## FACILITY SCHEDULE NO. 4

1. **Name:** Bee Creek Substation (PEC)
2. **Facility Location:** The Bee Creek Substation is located at 17603 Serene Hills Dr., Bee Caves, Travis County, Texas 78738.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Bee Creek Substation generally described as:
  - where the 138 kV operating bus attaches to the 4 hole pad on switch 10539.
  - where the 138 kV operating bus attaches to the 4 hole pad on switch 10549
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV and 24.9 kV. The metering current transformers are located in the total bay for T-1 and inside T-2 and T-3. The bus potential transformers are located on both 12.5 kV operating buses and the 24.9 kV operating bus
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

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

- 138 kV operating bus including structures, insulators, foundations and jumpers
- Three (3) 138kV circuit switchers CS-8435, CS8445 and CS-8455 with bypass switches 8437, 8447, 8457; and with associated disconnect switches 8434, 8444, 8446.
- One (1) 138 kV switch 8448
- Three (3) power transformers T-1, T-2 and T-3 with associated surge arresters
- One (1) 24.9 kV metering current transformer CT-3 (internal to T-3)
- One (1) 12.5 kV metering current transformer CT-2 (internal to T-2)
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer buses, 24.9 kV operating and transfer bus and associated cabling

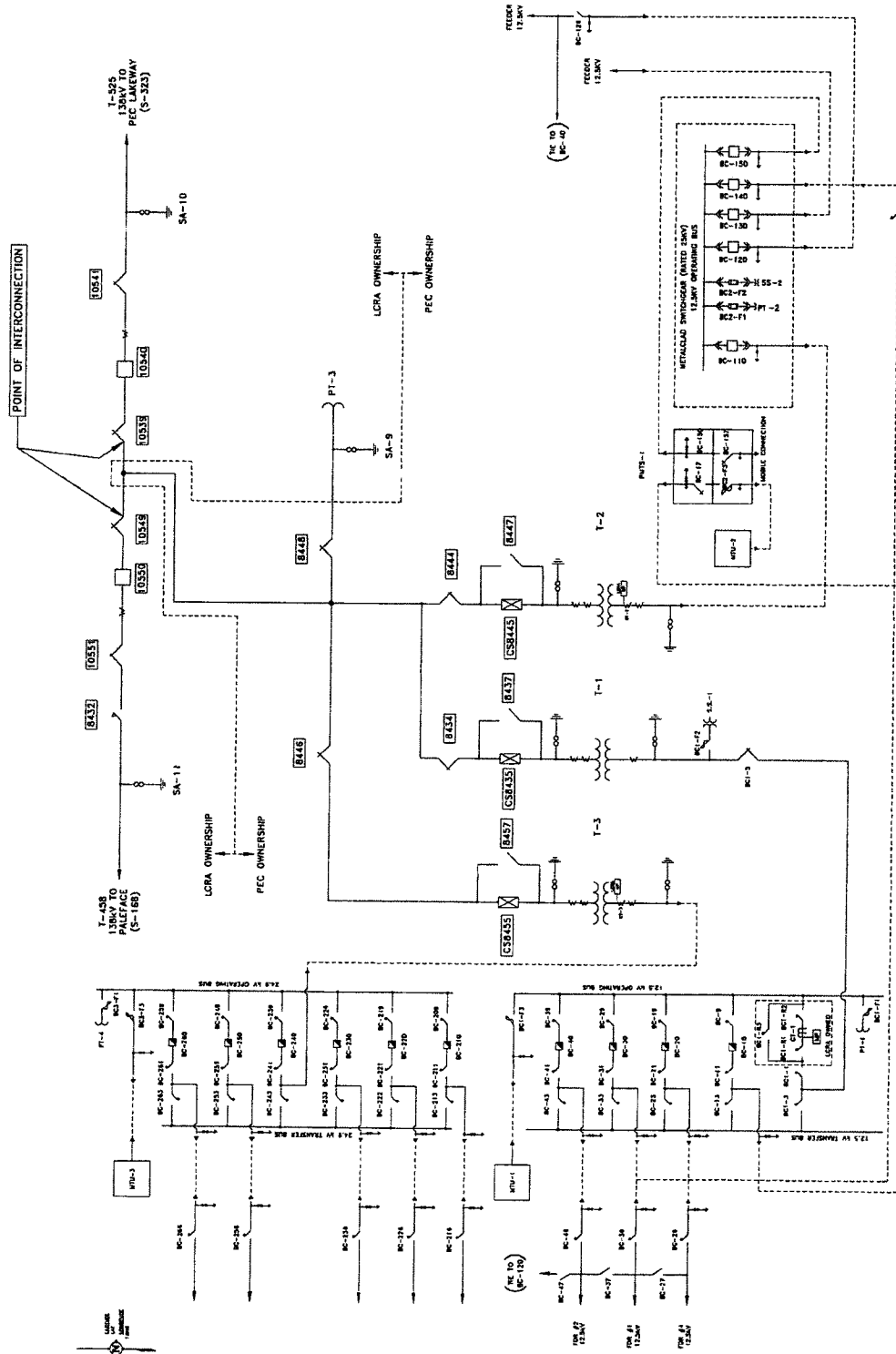
- One (1) 12.5 kV transformer bus disconnect switch BC1-5
- (2) 12.5 kV bus potential transformers PT-1 and PT-2 with associated fused disconnect switches
- One (1) 24.9 kV bus potential transformer PT-4 with associated fused disconnect switch
- Three (3) modulation transformers MTU-1, MTU-2 and MTU-3 with associated surges arresters and OMU units
- One (1) pad mounted transfer switch PMTS-1
- Two (2) 12.5 kV station service SS-1 and SS-2 with associated fused disconnect switches
- One (1) 24.9 kV station service SS-3 with associated fused disconnect switch
- Control house and battery

LCRA TSC owns:

- 138 kV dead-end structures, foundations, insulators and jumpers
- Two (2) 138 kV circuit breakers 10540 and 10550 including foundation, jumpers and protective relay packages
- Five (5) 138 kV switches 8432, 10539, 10541, 10549, 10551
- Three (3) 138 kV surge arresters SA-9, SA-10 and SA-11
- One (1) 138 kV bus potential transformer PT-3
- Three (3) low voltage switches BC1-R1, BC1-R2 and BC1-R3
- One (1) 12.5 kV metering current transformer CT-1
- Underfrequency relay panel

10. **Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

# BEE CREEK ONE-LINE DIAGRAM



BEE CREEK SUBSTATION  
THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S273-E-0001

## FACILITY SCHEDULE NO. 5

1. **Name:** Bergheim Substation (PEC)
2. **Facility Location:** The Bergheim Substation is located at 34001 Blanco Rd., Bulverde, Comal County, Texas 78163.
3. **Points of Interconnection:** There are four (4) Points of Interconnection in the Bergheim Substation generally described as:
  - where the 138 kV operating bus extension bolts to the 4 hole pad on circuit switcher CS 5275 in bay 1
  - where the 138 kV transfer bus extension bolts to the 4 hole pad on switch 5277 in bay 1
  - where the 138 kV operating bus extension bolts to the 4 hole pad on switch 5299 in bay 4
  - where the 138 kV transfer bus extension bolts to the 4 hole pad on switch 5303 in bay 4
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformer is located in the total bay for T-1. The bus potential transformer is located on the 24.9 kV operating bus.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

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

- 138 kV dead-end structures in 138 kV bays #1 and #4, foundations, insulators and jumpers
- One (1) 138 kV circuit breaker 5300 including foundation, jumpers and protective relay packages
- One (1) 138 kV circuit switcher CS-5275 with associated disconnect switch 5276
- One (1) 138 kV wave trap and tuner WT-3
- One (1) 138 kV coupling capacitors CC-3
- Four (4) 138 kV switches 5277, 5299, 5301 and 5303
- One (1) power transformer T-1 with associated surge arresters
- All distribution circuits including dead end insulators that attach to the dead end

- structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus and associated cabling
- One (1) 24.9 kV transformer bus disconnect switch BG1-5
- One (1) 24.9 kV bus potential transformer PT-1 with associated fused disconnect switch
- One (1) modulation transformer MTU-1 with associated surge arrester, fused disconnect switch and OMU units
- One (1) 24.9 kV station service SS-1 with associated fused disconnect switch
- Control house and battery

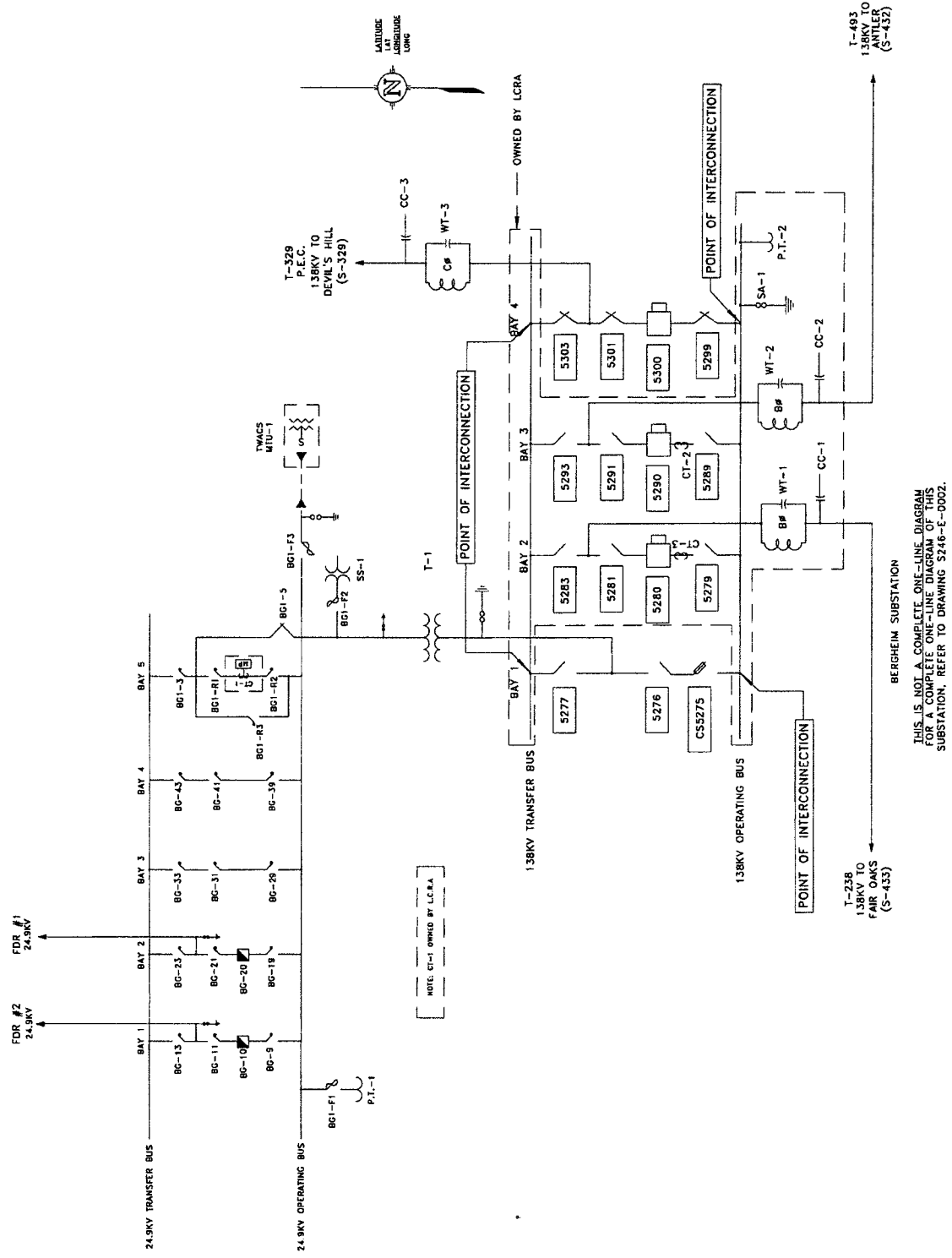
**LCRA TSC owns:**

- 138 kV dead-end structures in 138 kV bays #2 and #3, foundations, insulators and jumpers
- 138 kV operating and transfer bus including structures, insulators, foundations and jumpers
- Two (2) 138 kV circuit breakers 5280 and 5290 including foundation, jumpers and protective relay packages
- Six (6) 138 kV switches 5279, 5281, 5283, 5289, 5291 and 5293
- Two (2) 138 kV wave trap and tuner WT-1 and WT-2
- Two (2) 138 kV coupling capacitors CC-1 and CC-2
- Two (2) 138 kV current transformers CT-2 and CT-3
- One (1) 24.9 kV metering current transformer CT-1
- One (1) 138 kV bus potential transformer PT-2
- One (1) 138 kV surge arrester SA-1

- 10. Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.



# BERGHEIM ONE-LINE DIAGRAM



## FACILITY SCHEDULE NO. 6

1. **Name:** Buda Split Structure 8/8
2. **Facility Location:** The Buda Split is located at approximately one half (1/2) mile southwest of Turnersville Substation at structure 8/8, Hays County, Texas 78654.
3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Buda Split generally described as:
  - where LCRA's transmission line connects to the bridle jumper attached to PEC's transmission lines.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** No
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** N/A
8. **One Line Diagram Attached:** No (structure drawing attached)
9. **Description of Facilities Owned by Each Party:**

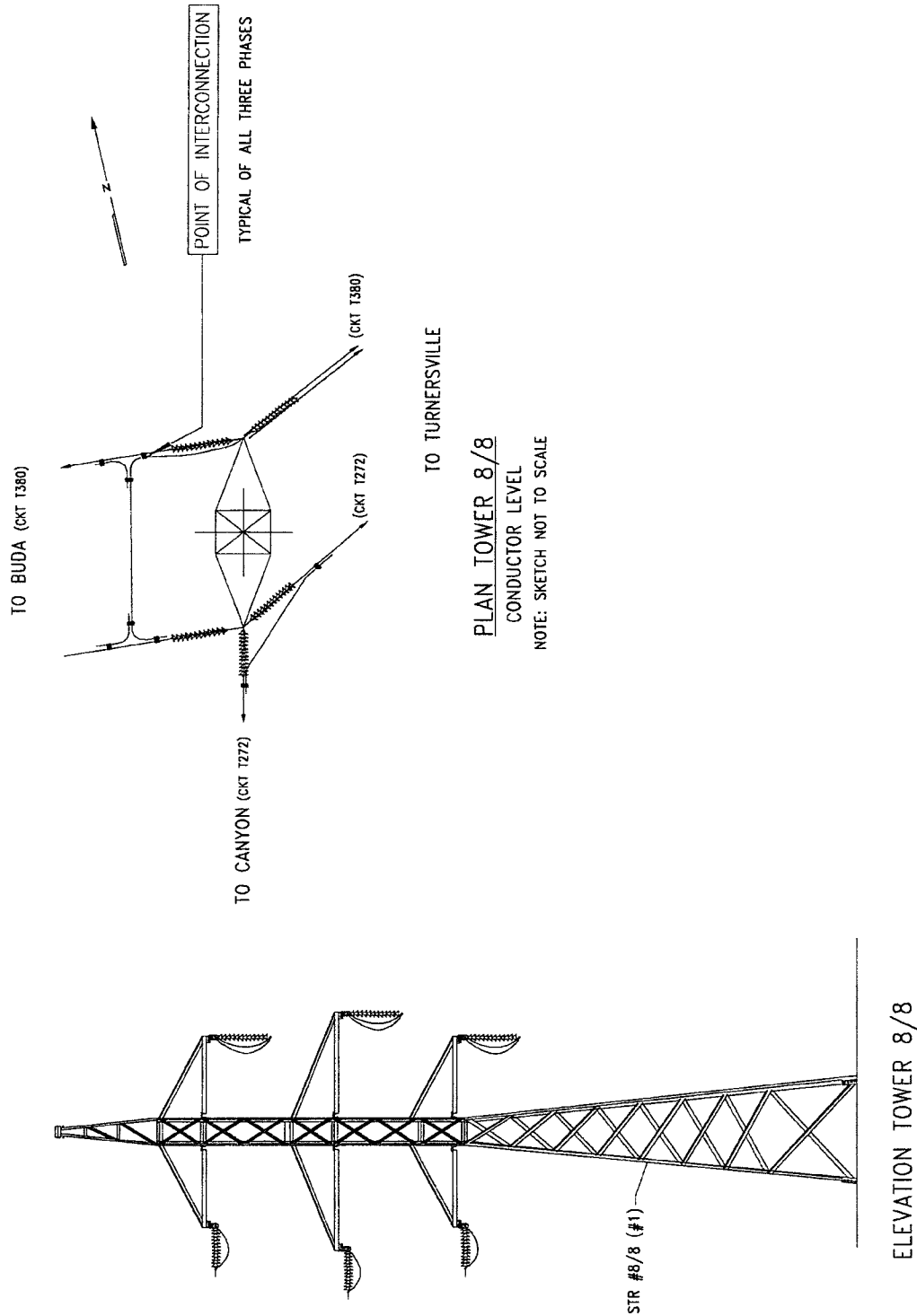
PEC owns:

  - The transmission lines from Buda Split to Buda Substation
  - Bridle jumper connecting PEC transmission lines
  - Dead end insulators for PEC transmission lines

LCRA TSC owns:

  - Structure 8/8
  - The transmission line from Buda Split to Turnersville Substation
  - Dead end insulator for LCRA TSC transmission lines
10. **Operational Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:** None

# BUDA SPLIT STRUCTURE DRAWING



## BUDA SPLIT

THIS IS NOT A COMPLETE DRAWING  
FOR A COPY OF THE COMPLETE DRAWING SEE DWG S272-S-0008

## FACILITY SCHEDULE NO. 7

1. **Name:** Burnet Substation (LCRA)
2. **Facility Location:** The Burnet Substation is located at 711 Hamilton Creek Dr., Burnet, Burnet County, Texas 78611.
3. **Points of Interconnection:** There are four (4) Points of Interconnection in the Burnet Substation generally described as:
  - where the 795 ACSR conductor from LCRA TSC 69 kV bay #5 (North) attaches to the insulator on the A-frame structure of PEC's 69 kV bay #4.
  - where the conductor from LCRA TSC's T-2 distribution bay #12 (South) attaches to switch BU-2 in PEC's T-1 distribution bay #11 (Jumper and Pad)
  - where the bridle jumper from switch 10343 attaches to the 138 kV transfer bus.
  - where the bridle jumper from switch 10344 attaches to the 138 kV operating bus.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 69/138 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformers are inside T-1, inside PWT-2, T-2 and in PEC's 12.5 kV distribution total bay #11. The bus potential transformers are on the 12.5 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

- 138 kV A-frame structures in 138 kV Bay #2, foundations, insulators and jumpers
- 69 kV operating and transfer bus including structures, insulators, foundations and jumpers on the south side of the substation yard.
- 69 kV A-frame structures on south side of substation yard including foundations, insulators and jumpers
- All distribution circuits on the south side of the substation yard including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers on the south side of the substation yard including jumpers, protective relay packages and foundations
- All distribution and total bays on the south side of the substation yard including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus and associated cabling
- One (1) 138 kV circuit switcher CS-10345 with associated disconnect switches

10344, 10346 and bypass switch 10347

- One (1) 138 kV switch 10343
- One (1) power transformer T-1 with associated surge arresters
- One (1) modulation transformer MTU-1 with associated surge arrester, fused disconnect switch and OMU units
- Two (2) 69 kV circuit breakers 1570 and 1600 including foundation, jumpers and protective relay packages
- Eight (8) 69 kV switches 1569, 1571, 1573, 1599, 1601, 1603, 1606 and 1607
- One (1) 12.5 kV station service SS-1 with associated fused disconnect switch
- One (1) 12.5 kV bus potential transformer PT-1 with associated fused disconnect switch
- One (1) 12.5 kV distribution bus switch BU-2

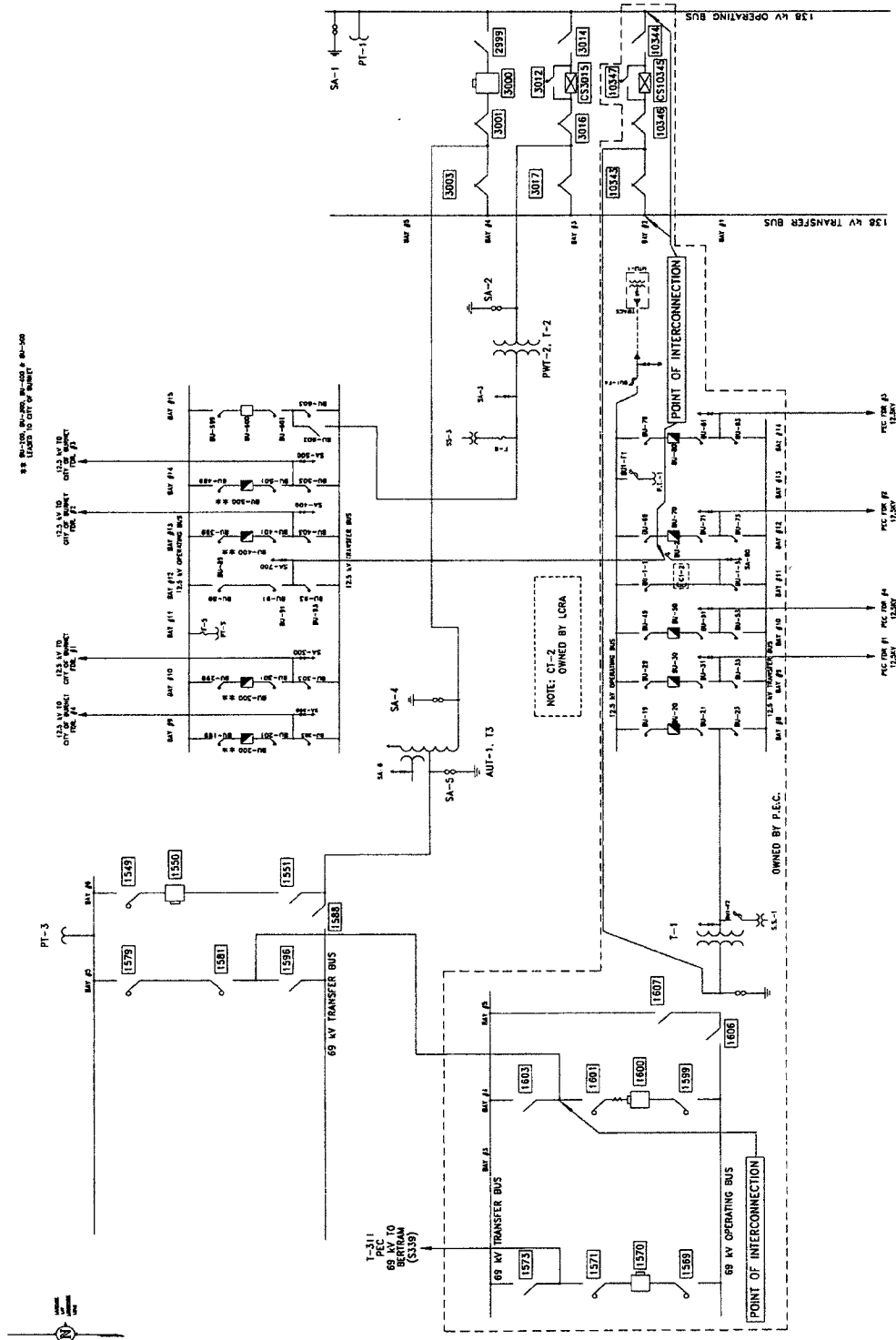
LCRA TSC owns:

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

- 138 kV dead-end structures in 138 kV bays #1, #3, #4 and #5; foundations; insulators and jumpers
- 138 kV operating and transfer bus including structures, insulators, foundations and jumpers
- 69 kV operating and transfer bus on the north side of the substation yard including structures, insulators, foundations and jumpers
- 69 kV A-frame structures on north side of substation yard including foundations, insulators and jumpers
- All distribution circuit breakers on the north side of the substation yard including jumpers, protective relay packages and foundations
- All distribution and total bays on the north side of the substation yard including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformer and associated cabling
- One (1) 138 kV circuit switcher CS-3015 with associated disconnect switches 3014, 3016 and bypass switch 3012
- Four (4) 138 kV switches 2999, 3001, 3003 and 3017
- One (1) 138 kV circuit breaker 3000 including foundation, jumpers and protective relay package
- One (1) 138 kV bus potential transformer PT-1
- One (1) 138 kV surge arrester SA-1
- One (1) power transformer PWT-2, T-2 with associated surge arresters
- One (1) auto transformer AUT-1, T-3 with associated surge arresters
- Six (6) 69 kV switches 1549, 1551, 1579, 1581, 1588 and 1596
- One (1) 69 kV circuit breaker 1550 including foundation, jumpers and protective relay package
- One (1) 69 kV bus potential transformer PT-3
- One (1) 12.58 kV metering current transformer CT-2
- One (1) 12.5 kV station service SS-3 with associated fused disconnect switch
- Control house and battery

10. **Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
11. **Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
12. **Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

# BURNET ONE-LINE DIAGRAM



BURNET SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S109-E-0002.

## FACILITY SCHEDULE NO. 8

1. **Name:** Buttercup Substation (PEC)
2. **Facility Location:** The Buttercup Substation is located at 1212 Cypress Creek Rd., Cedar Park, Williamson County, Texas 78613.
3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Buttercup Substation generally described as:
  - where the jumper from the 138 kV Operating Bus #1 attaches to the four hole pad of switch 9939.
  - where the jumper from the 138 kV Transfer Bus attaches to the four hole pad of switch 9943.
4. **Transformation Services Provided by LCRA TSC:** No
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 138 kV
7. **Metered Voltage and Location:** The metering voltage is 24.9 kV. The metering current transformers are inside T-1, T-2, and T-3. The bus potential transformers are on the 24.9 kV operating buses.
8. **One Line Diagram Attached:** Yes
9. **Description of Facilities Owned by Each Party:**

PEC owns:

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

- 138 kV dead-end structures, foundations, insulators and jumpers
- Line protection equipment for the LCRA TSC owned Buttercup to Kent Street 138 kV transmission line
- Two (2) 138 kV coupling capacitors CC-1 and CC-2
- Two (2) 138 kV wave traps and tuners WT-1 and WT-2
- Two (2) 138 kV circuit breakers 8890 and 8900 including foundation, jumpers and protective relay
- One (1) 138 kV surge arrester
- One (1) 138 kV bus potential transformer PT-1
- Eight (8) 138 kV switches 8889, 8891, 8892, 8893, 8899, 8901, 8903 and 10439
- Three (3) 138 kV circuit switchers CS-8895, CS-8905 and CS-10455 with associated disconnect switches 8894, 8904, 10454 and bypass switches 8897, 8907 and 10457
- Three (3) power transformers T-1, T-2 and T-3 with associated surge arresters



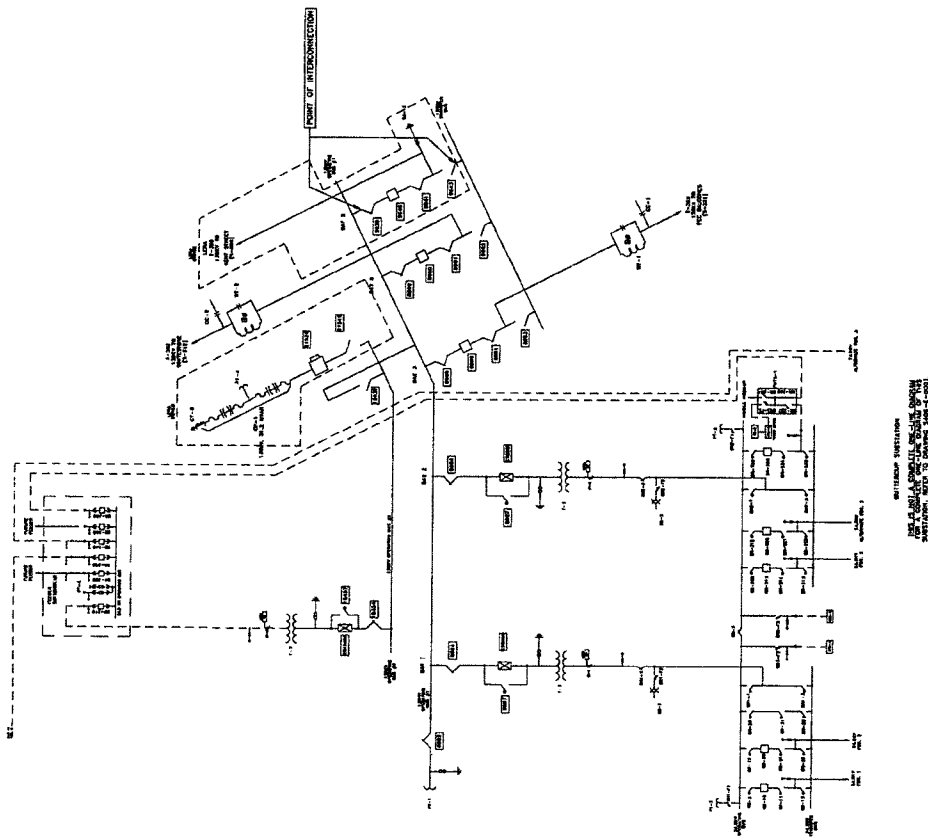
- Three (3) 24.9 kV metering current transformers CT-1, CT-2 and CT-3 (internal to T-1, T-2 and T-3)
- All distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- All distribution circuit breakers including jumpers, protective relay packages and foundations
- All distribution and total bays including feeder switch gear house, A-frames, trusses, insulators, disconnect switches, surge arresters, 24.9 kV operating and transfer bus and associated cabling
- Three (3) 24.9 kV bus potential transformers PT-2, PT-3 and PT-4 with associated fused disconnect switches
- Three (3) modulation transformers MTU-1, MTU-2 and MTU-3 with associated surge arresters, fused disconnect switches, and OMU units
- Three (3) 24.9 kV station service SS-1, SS-2 and SS-3 with associated fused disconnect switches
- Two (2) 24.9 kV transformer bus disconnect switches BR1-5 and BR2-5
- One (1) pad mounted transfer switch PMTS-1
- Control house (~ 30' X 30') and battery

LCRA TSC owns:

- The following transmission lines comprised of conductors, insulators, and connecting hardware:
  - o Buttercup to Kent Street 138 kV transmission line
- Two (2) 138 kV circuit breakers 21520 and 9940 including foundation, jumpers and protective relay
- Four (4) 138 kV switches 21519, 9939, 9941, and 9943
- One (1) 138 kV surge arrester SA-13
- One (1) 138 kV capacitor bank CP-1
- One (1) 138 kV capacitor bank potential transformer PT-4
- One (1) 138 kV single phase current transformer CT-3
- Underfrequency relay panel
- Control house (21' X 27') and battery

- 10. Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

## BUTTERCUP ONE-LINE DIAGRAM



## FACILITY SCHEDULE NO. 9

1. **Name:** Camp Gary Substation (LCRA/TEC)
2. **Facility Location:** The Camp Gary Substation is located at 100 Railroad Ave., San Marcos, Caldwell County, Texas 78666.
3. **Points of Interconnection:** There are nine (9) Points of Interconnection in the Camp Gary Substation generally described as:
  - where the incoming distribution line connects to the tubular bus between switches CG-31 and CG-33 at breaker CG-30.
  - where the jumper from breaker CG-30 connects to the 4 hole pad on switch CG-29.
  - where the jumper from breaker CG-30 connects to the 4 hole pad on switch CG-31.
  - where the incoming distribution line connects to the tubular bus between switches CG-41 and CG-43 at breaker CG-40.
  - where the jumper from breaker CG-40 connects to the 4 hole pad on switch CG-39.
  - where the jumper from breaker CG-40 connects to the 4 hole pad on switch CG-41.
  - where the incoming distribution line connects to the tubular bus between switches CG-51 and CG-53 at breaker CG-50.
  - where the jumper from breaker CG-50 connects to the 4 hole pad on switch CG-49.
  - where the jumper from breaker CG-50 connects to the 4 hole pad on switch CG-51.
4. **Transformation Services Provided by LCRA TSC:** Yes
5. **Metering Services Provided by LCRA TSC:** Yes
6. **Delivery Voltage:** 12.5 kV
7. **Metered Voltage and Location:** The metering voltage is 12.5 kV. The metering current transformer is located in the total bay for T-1. The bus potential transformer is located on the 12.5 kV operating bus.
8. **One Line Diagram Attached:** Yes

**9. Description of Facilities Owned by Each Party:**

PEC owns:

- Three (3) distribution circuit breakers CG-30, CG-40 and CG-50 including foundations, jumpers and protective relay packages
- Three (3) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware

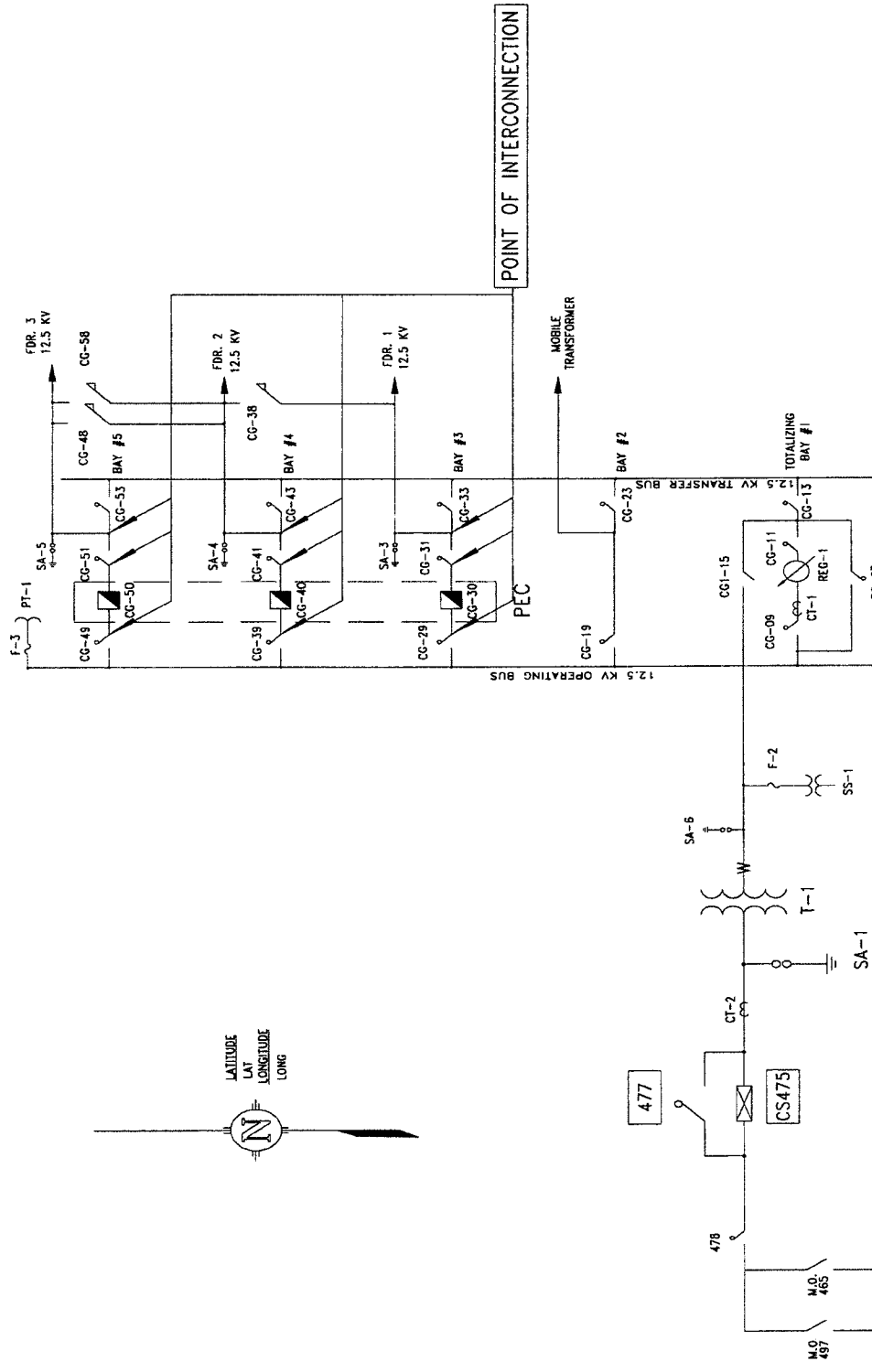
Texas Employment Commission owns the Camp Gary Substation property.

LCRA TSC owns:

- One (1) 69 kV circuit switcher CS-475 with associated disconnect switch 478 and bypass switch 477
- Two (2) 69 kV motor operated switches 497 and 465
- One (1) power transformer T-1 with associated surge arresters
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, mobile transformer connection and associated cabling
- Three (3) 12.5 kV single phase regulators REG-1 with associated disconnect and bypass switches
- One (1) 12.5 kV bus potential transformer PT-1 with associated fused disconnect switch
- One (1) 69 kV current transformer CT-2
- One (1) 12.5 kV metering current transformer CT-1
- One (1) 12.5 kV station service SS-1 with associated disconnect switch
- One (1) 12.5 kV transformer bus disconnect switch CG1-15
- Control house and battery

- 10. Operational Responsibilities of Each Party:** Each Party is responsible for the operation of the equipment it owns.
- 11. Maintenance Responsibilities of Each Party:** Each Party will be fully responsible for the maintenance of the equipment it owns.
- 12. Other Terms and Conditions:** PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.

## CAMP GARY ONE-LINE DIAGRAM



CAMP GARY SUBSTATION

THIS IS NOT A COMPLETE ONE-LINE DIAGRAM  
FOR A COMPLETE ONE-LINE DIAGRAM OF THIS  
SUBSTATION, REFER TO DRAWING S110-E-0001.

## **FACILITY SCHEDULE NO. 10**

- 1. Name:** Canyon Substation (LCRA)
- 2. Facility Location:** The Canyon Substation is located at 2349 N. IH 35, San Marcos, Hays County, Texas 78666.
- 3. Points of Interconnection:** There is one (1) Point of Interconnection in the Canyon Substation generally described as:
  - where the incoming 138 kV transmission line from Highway 32 terminates at the dead end insulator.

Additionally, there is one (1) Point of Interconnection (San Marcos to Kyle Transmission Line Tie) located on the Canyon Substation property but outside the Canyon Substation fence located at PEC structure #2 (Tie Structure) of T-322. This Point of Interconnection is a transmission line tie between the PEC 138 kV line to Kyle and the LCRA TSC 138 kV line to San Marcos. This new line made by this tie will not electrically terminate in the Canyon Substation. Specifically, the Point of Interconnection is where the jumpers from the PEC portion of the T-322 transmission line connect to the conductors on the LCRA TSC portion of the line, shown on the attached tie structure drawing, for San Marcos to Kyle Transmission Line to be known as T-322.

- 4. Transformation Services Provided by LCRA TSC:** No
- 5. Metering Services Provided by LCRA TSC:** 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:**

PEC owns:

- The following transmission lines comprised of conductors, insulators, and connecting hardware:
  - Canyon to Hwy 32 138 kV transmission line
- Fiber optic patch panel, facility entry cable and conduit for PEC OPGW
- One acre of land

PEC will exchange signals and connections as required for LCRA TSC SCADA.

LCRA TSC owns: The Canyon Substation including, but not limited to, the following items:

- Control house, station batteries
- Six (6) 138 kV 2000A. circuit breakers 10260, 3160, 3170, 20970, 20980, and 20990
- Twelve (12) 138 kV circuit breaker disconnect switches 10259, 10261, 20971, 20969, 20981, 20979, 3159, 3161, 3169, 3171, 20991, 20989
- One (1) 138 kV switch 20984
- One (1) 138 kV circuit switcher CS-20975 with associated disconnect switch 20974 and bypass switch 20977
- One (1) power transformer PWT-1, T-3, with associated surge arresters
- One (1) 138 kV potential voltage transformer PVT-1
- One (1) 12.5 kV station service SS-3 with associated fused disconnect switch
- Three (3) 138 kV coupling capacitor voltage transformers CCVT-4, CCVT-5 and CCVT-6
- Four (4) 138 kV Surge arresters SA-2, SA-11, SA-12, SA-13,
- Six (6) 138 kV metering current transformers CT-2, CT-3, CT-4, CT-5, CT-6, CT-7
- Transmission line termination bays with surge arresters
- Associated structures, insulators and foundations
- Transmission line relay protection panels and all associated equipment for the LCRA transmission lines
- 138 kV bus differential, transmission breaker failure relaying, and associated panels

LCRA TSC will provide PEC with 120/240 VAC, 125 Vdc and panel space in the LCRA TSC control house for PEC equipment as necessary.

LCRA TSC will exchange signals and connections as required for PEC SCADA.

#### **San Marcos to Kyle Transmission Line Tie:**

PEC owns:

- PEC's 138 kV transmission line to Kyle, including foundations, structures, insulators, connectors, transmission line conductors, underbuilt distribution, shield wire, OPGW, fiber splice boxes, hardware and assemblies to terminate PEC's transmission line on the Tie Structure.

LCRA TSC owns:

- LCRA TSC's 138 kV transmission line to San Marcos (formerly known as T-462), including foundations, structures, insulators, connectors, transmission line conductors, shield wire, hardware and assemblies to terminate LCRA TSC's transmission line on the Tie Structure.

- 10. Operational Responsibilities of Each Party:** LCRA TSC will direct and coordinate all switching for transmission facilities, including the 138 kV transmission lines, 138 kV

circuit breakers, PEC's 138 kV circuit switcher, associated 138 kV disconnect switches, 138 kV bus and bus differential in accordance with the Facilities and Premises Lease and Operating Agreement between PEC and LCRA TSC.

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

**12. Other Terms and Conditions:**

- PEC and LCRA TSC are to share access to the substation by PEC and LCRA TSC locks in the substation entrance gate; along with control house owner's locks on the control house doors.
- LCRA TSC will install channel banks connecting the PEC fiber patch panels in the Canyon Substation and in the PEC control house at the Kyle Substation to facilitate operating the transmission network.
- PEC and LCRA TSC shall both have access through the LCRA TSC channel banks and PEC fiber between Canyon substation and Kyle substation for the protective relaying associated with T-322 (San Marcos to Kyle transmission line), for SCADA and for voice communications to facilitate operating the transmission network.
- PEC will provide LCRA TSC with 120/240 VAC, 125 Vdc and panel space in the PEC Kyle control house for LCRA TSC equipment to operate the transmission network.
- There will be no fees associated with the use of the LCRA TSC channel banks or the PEC fiber mentioned above.



# SAN MARCOS TO KYLE TRANSMISSION LINE TIE STRUCTURE

