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INTERCONNECTION AGREEMENT

Between

Bandera Electric Cooperative, Inc.

and

LCRA Transmission Services Company

January 19, 2010

INTERCONNECTION AGREEMENT

:

BETWEEN

BANDERA ELECTRIC COOPERATIVE, INC.

AND

LCRA TRANSMISSION SERVICES CORPORATION

DATED: 1/19/2010

INTERCONNECTION AGREEMENT BETWEEN BANDERA ELECTRIC COOPERATIVE, INC. AND LCRA TRANSMISION SERVICES CORPORATION

This Agreement is made and entered into this $\underline{19}$ day of $\underline{50m}$, 2010, by and between the Bandera Electric Cooperative, Inc. ("BEC") 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 twenty (20) years from the effective date, and shall continue in effect thereafter for periods of five (5) 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.

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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, not withstanding the Facilities and Premises Lease and Operating Agreement. If there is a conflict between this Interconnection Agreement and the Facilities and Premises Lease and Operating Agreement will prevail. 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 BEC also takes Transformation Service from LCRA TSC, BEC 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 <u>Agreement</u> 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 <u>ERCOT</u> shall mean the Electric Reliability Council of Texas, Inc.

3.3 <u>ERCOT Protocols</u> 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 <u>Facility Schedule(s)</u> 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 <u>Good Utility Practice</u> 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.

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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 NERC, or successor organization(s).

3.6 <u>Independent System Operator</u> shall mean the ERCOT Independent System Operator as defined in the PUCT Substantive Rules.

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

3.8 <u>NERC Reliability Standards</u> shall mean the mandatory electric reliability standards enforced by NERC.

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

3.10 <u>PUCT</u> 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,

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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 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 as soon as practical. 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 latest 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 NERC Reliability Standards.

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.

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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 operating guidelines of ERCOT and 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 operating guides as established from time to time by ERCOT or its successor. Each Party will provide the reactive requirements for its own system so as not to impose a burden on the other system.

6.5 As applicable, each Party will determine the operating limits of the facilities that it owns and make such limits known to the Party operating those facilities. The operating Party of those facilities will not exceed those limits without prior approval of the Party owning the facilities.

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6.6 Each Party shall be responsible for complying with any ERCOT Protocol or other operating requirement as well as any NERC Reliability Standard for which it is applicable.

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. Such request shall be based on an engineering analysis and made at least eighteen (18) months in advance and not be unreasonably denied. The Parties may agree to a shorter notice period.

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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, applicable ERCOT operating and metering guidelines, 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 five (5) business days 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 ERCOT operating or metering guidelines, whichever is applicable, 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 ERCOT operating or metering guidelines, and 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, applicable ERCOT operating and metering guidelines, and the ERCOT Protocols.

ARTICLE X – INDEMNIFICATION AND LIMITATION OF LIABILITY

10.1 EACH PARTY 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 OR DAMAGE TO PROPERTY, 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, EXCEPT IN CASES OF GROSS NEGLIGENCE OR INTENTIONAL WRONGDOING BY THE OTHER PARTY TO THE EXTENT PERMITTED BY LAW. IN NO EVENT SHALL A PARTY BE LIABLE FOR

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CONSEQUENTIAL, SPECIAL, INCIDENTAL OR PUNITIVE DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF REVENUE, OR LOSS OF PRODUCTION.

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:

- BANDERA ELECTRIC COOPERATIVE, INC. Manager, Engineering
 P.O. Box 667
 Bandera, TX 78003
- (b) LCRA TRANSMISSION SERVICES CORPORATION Manager, Transmission Engineering LCRA
 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 that has an in interest to all or a substantial portion of the Party's transmission and distribution business; or (2) in connection with any financing or financial arrangements.

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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, to the extent allowed by law, 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

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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, including attorneys fees, 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 The several provisions of this Agreement are not intended to and shall not create rights of any character in, nor be enforceable by, parties other than the signatories to this Agreement and their assigns.

16.3 Neither Party shall be liable to the other for any indirect, consequential, incidental, punitive, or exemplary damages arising from the performance or non-performance of any obligation under this Agreement.

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16.4 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.

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

16.6 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.

16.7 The invalidity of one or more phrases, sentences, clauses, Sections or Articles contained in this Agreement shall not affect the validity of the remaining portions of this Agreement so long as the material purposes of this Agreement can be determined and carried out.

16.8 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.

- Remainder of page has intentionally been left blank. -

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IN WITNESS WHEREOF, the Parties have caused this Interconnection Agreement between LCRA Transmission Services Corporation and Bandera 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.

BANDERA ELECTRIC COOPERATIVE, INC. By: Brian D. Bartos, P.E. Title: Manager, Engineering 19/2010 11

LCRA TRANSMISSION SERVICES CORPORATION

By: E. Pfefferloop

Title: LCRA Transmission Engineering Manager

14/10 Date:



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Date:

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EXHIBIT A

FACILITY	LOCATION OF	INTERCONNECTION	EFFECTIVE DATE
SCHEDULE	POINT(S) OF	VOLTAGE (KV)	OF
NO.	INTERCONNECTION		INTERCONNECTION
	(# of Points)		
1	Boerne (8)	12.5/138 kV	
2	Boerne CICO (5)	12.5/24.9/138 kV	
3	Cypress Creek (1)	138 kV	
4	Leakey (1)	69 kV	
5	Medina Lake (1)	138 kV	
6	Menger Creek (6)	12.5 kV	
7	Pipe Creek (0)		
8	Turtle Creek (1)	138 kV	
9	Verde Creek (2)	138 kV	
10	Welfare (2)	138 kV	
11	Bandera (0)		
12	Mason Creek (0)		
13	Medina City (0)		
14	Tarpley (0)		
15	Utopia (0)		
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- 1. Name: Boerne Substation
- 2. Facility Location: The Boerne Substation is located at 751 Adler St., Boerne, Kendall County, Texas 78006.
- 3. **Points of Interconnection:** There are eight (8) Points of Interconnection in the Boerne Substation generally described as:
 - where the tubular jumper from the 138 kV transfer bus bolts to the four hole pad on switch 5426.
 - where the jumper from the tubular bus between switches 5424 and 5426 attaches to the dead end insulator for the PWT-2, T-2; 138 kV transformer bus.
 - where the jumper from circuit switcher CS5425 bolts to the four hole pad on switch 5424.
 - where the PWT-2, T-2; 12.5 kV transformer bus terminal connector bolts to the four hole pad at the transformer bushing connection coupler.
 - where the jumper from switch BO-52 bolts to the four hole pad on the PWT-2, T-2; 12.5 kV operating bus.
 - where the jumper from switch BO-54 bolts to the four hole pad on the PWT-2, T-2; 12.5 kV transfer bus.
 - where the jumper from breaker BO-60 bolts to the four hole pad on switch BO-59.
 - where the jumper from breaker BO-60 bolts to the four hole pad on switch BO-61.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: 12.5 kV and 138 kV
- 7. Metered Voltage and Location: The metering voltage is 12.5 kV. The metering current transformers are located inside PWT-2, T-2 and in each distribution bay. The bus potential transformer is located on the PWT-2, T-2; 12.5 kV operating bus.
- 8. One Line Diagram Attached: Yes

9. Description of Facilities Owned by Each Party:

BEC owns:

- Two (2) 138 kV switches 5424 and 5426
- Four (4) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- Four (4) distribution circuit breakers BO-50, BO-70, BO-80 and BO-90 including jumpers and protective relay packages
- Four (4) distribution circuit breaker foundations in bays 9, 11,12 and 13
- Five (5) distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, 12.5 kV operating and transfer bus, bus potential transformer, and associated cabling
- One (1) MTU and associated fuse F-6
- Station Service SS-2

LCRA TSC owns:

The Boerne Substation including but not limited to the following items:

- 138 kV operating and transfer bus including structures, foundations and jumpers
- One (1) circuit switcher CS-5425 with associated bypass switch 5427 and disconnect switch 5428
- One (1) power transformer PWT-2, T-2 with associated surge arresters
- One (1) 138 kV bus potential transformer PT-3
- One (1) 138 kV surge arrester SA-6
- One (1) total circuit breaker BO-60 with jumpers, protective relaying and foundation
- Two (2) 12.5 kV bus tie switches BO-52 and BO-54
- Control house (42' X 18')
- Portable battery house (12' X 21') and batteries
- Patrolman's house (12' X 21')
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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BOERNE ONE-LINE DIAGRAM



LCRA TSC – BEC



- 1. Name: Boerne Cico Substation
- 2. Facility Location: The Boerne Cico Substation is located at 234 SH 46 West, Boerne, Kendall County, Texas 78006.
- 3. **Points of Interconnection:** There are five (5) Points of Interconnection in the Boerne Cico Substation generally described as:
 - where the Boerne-Cico to Pipe Creek transmission line terminates at the dead end insulator in bay #1.
 - where the PWT-3, T-4; 12.5 kV transformer wire bus, passing through the dead end termination, bolts to the four hole pad on switch BC-21.
 - where the jumper from switch BC-23 attaches to the PWT-3, T-4; 12.5 kV transformer wire bus with a parallel grove connector.
 - where the PWT-2, T-3; 24.9 kV transformer wire bus, passing through the dead end termination, bolts to the four hole pad on switch BC-11.
 - where the jumper from switch BC-13 attaches to the PWT-2, T-3; 24.9 kV transformer wire bus with a parallel grove connector.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: 12.5/24.9/138 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 12.5 kV total bay and the 24.9 kV total bay. The bus potential transformers are located on the 12.5 kV operating bus and 24.9 kV operating bus.
- 8. One Line Diagram Attached: Yes
- 9. Description of Facilities Owned by Each Party:

BEC owns:

- The following transmission line comprised of conductors, insulators, and connecting hardware:
 - o Boerne Cico to Pipe Creek transmission line
- 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

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- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, operating and transfer buses, bus potential transformers and associated cabling
- Six (6) single phase voltage regulators REG-2 and REG-3 with associated disconnect and bypass switches
- Two (2) MTUs with associated fuses F-8 and F-9
- Control house (21' X 24') and battery

LCRA TSC owns:

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

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV operating and transfer bus including structures, foundations and jumpers
- One (1) 138 kV circuit breaker 9990 including jumpers and protective relay package
- Nine (9) 138 kV switches 7069, 7071, 7073, 7079, 7081, 7083, 9989, 9991, 9993
- Two (2) circuit switchers CS-7075 and CS-7085 with associated bypass switches 7077 and 7087
- Two (2) power transformers PWT-2, T-3 and PWT-3, T-4 and associated surge arresters
- One (1) 138 kV surge arrester SA-23
- Three (3) relaying current transformers CT-7, CT-9 and CT-10
- Two (2) metering current transformers CT-5 and CT-6
- Two (2) single phase relaying current transformers CT-8 and CT-11
- Two (2) station service SS-3 and SS-4
- Control house (24' X 32') 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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BOERNE CICO ONE-LINE DIAGRAM

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- 1. Name: Cypress Creek Substation
- 2. Facility Location: The Cypress Creek Substation is located at 18 Pankratz Rd., Comfort, Kendall County, Texas 78013.
- 3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Cypress Creek Substation generally described as:
 - where BEC connector on the jumper from the 138 kV operating bus attaches to the tubular bus between switches 1436 and 1438.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 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. The metering current transformers are located inside transformer PWT-1, T-1. The bus potential transformer is located on the PWT-1, T-1; 12.5 kV transformer bus.
- 8. One Line Diagram Attached: Yes
- 9. Description of Facilities Owned by Each Party:

BEC owns:

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

- Two (2) 138 kV switches 1434 and 1432
- 138 kV bus including structures, foundations and jumpers
- One (1) circuit switcher CS-1445 with associated bypass switch 1447
- One (1) power transformer PWT-1, T-1 and 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, operating and transfer buses, bus potential transformers, current transformers and associated cabling
- Control house and battery bank
- Two (2) station service SS-1 and SS-2

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LCRA TSC owns:

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- 138 kV dead-end structures, foundations, insulators and jumpers
- Three (3) 138 kV motor operated switch with interrupter MO-1436, MO-1437 and MO-1438
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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CYPRESS CREEK ONE-LINE DIAGRAM



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- 1. Name: Leakey Substation
- 2. Facility Location: The Leakey Substation is located at 3143 S. US Hwy 83, Rio Frio, Real County, Texas 78879.
- 3. Points of Interconnection: There is one (1) Point of Interconnection in the Leakey Substation generally described as:
 - where the jumper from switch 332 on the 69 kV dead end structure attaches to the dead end insulator near switch 344 on the 69 kV box structure.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: 69 kV
- 7. Metered Voltage and Location: The metering voltage is 12.5 kV and 24.9 kV. The metering current transformers for PWT-1, T-1 are located in the 12.5 kV transformer bus and in each distribution bay. The metering current transformer for PWT-2, T-2 is located in the 24.9 kV transformer bus. The bus potential transformers are located on the 12.5 kV operating bus and the 24.9 kV operating bus.
- 8. One Line Diagram Attached: Yes
- 9. Description of Facilities Owned by Each Party:

BEC owns:

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

- Six (6) 69 kV switches 342, 344, 346, 348, 351, and 353
- One (1) 69 kV circuit breaker 350 including foundation, jumpers and protective relay packages
- Two (2) power transformer PWT-1, T-1; PWT-2, T-2 and associated surge arresters
- One (1) 69 kV bus potential transformer PT-3
- Two (2) totalizing current transformers CT-1 and CT-2
- Two (2) power fuses F-1 and F-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

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switches, surge arresters, operating and transfer buses, bus potential transformers and associated cabling

- Six (6) single phase regulators REG-1 and REG-2 with associated disconnect and bypass switches
- Control house and battery bank
- Two (2) station service SS-1 and SS-2

LCRA TSC owns:

- The following transmission line comprised of conductors, insulators, and connecting hardware:
 - o Leakey to Camp Wood transmission line
- One (1) 69 kV A-frame dead-end structure, foundation, insulators and jumpers
- One (1) 69 kV bus suspension dead-end structure, foundation, insulators and jumpers
- Four (4) 69 kV switches 319, 321, 332, 334
- One (1) 69 kV circuit breaker 320 including foundation, jumpers and protective relay packages
- One (1) three phase voltage regulator REG-3 and associated surge arresters
- Five (5) current metering transformers CT-3, CT-4, CT-5, CT-6 and CT-7
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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LEAKEY ONE-LINE DIAGRAM



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- 1. Name: Medina Lake Substation
- 2. Facility Location: The Medina Lake Substation is located at 8843 FM 1283, Pipe Creek, Medina County, Texas 78063.
- 3. **Points of Interconnection:** There are one (1) Point of Interconnection in the Medina Lake Substation generally described as:
 - where the jumper attaches to the four hole pad on switch 21928
- 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 transformers are located in the total bay for PWT-1, T-1 and inside PWT-2, T-2. The bus potential transformers are located on both of the 12.5 kV operating buses.
- 8. One Line Diagram Attached: Yes
- 9. Description of Facilities Owned by Each Party:

BEC owns:

- The Medina Lake Substation including, but not limited to, the following items:
- The following transmission line comprised of conductors, insulators, and connecting hardware:
 - o Medina Lake to Pipe Creek transmission line
- One (1) 138 kV dead-end structures, foundation, insulators and jumpers
- One (1) 138 kV circuit breaker 21920 including jumpers and protective relay packages
- Eight (8) 138 kV switches 21918, 21919, 21921, 21926, 21928, 414, 1044 and 398
- One (1) 138 kV surge arrester SA-12
- One (1) CVT
- One 1) station service transformer and associated fuse
- 138 kV bus including structures, foundations and jumpers
- Two (2) circuit switchers CS-1045 and CS-415 with associated bypass switches 1047 and 417
- Two (2) power transformer PWT-1, T-1; PWT-2, T-2 and associated surge arresters

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- One (1) single phase current transformer CT-7
- 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
- Two (2) total breakers ML-20 and ML-80 including jumpers, protective relay packages and foundations
- All distribution and total bays including A-frames, trusses, insulators, disconnect switches, surge arresters, operating and transfer buses, bus potential transformers, current transformer CT-1 and associated cabling
- 12.5 kV transformer bus disconnect switches
- Control house
- Battery bank and charger

LCRA TSC owns:

- The following transmission line comprised of conductors, insulators, and connecting hardware:
 - o Medina Lake to CPS Tie transmission line
- One (1) 138 kV dead-end structures, foundation, insulators and jumpers
- One (1) 138 kV circuit breaker 21930 including jumpers and protective relay packages
- Three (3) 138 kV switches 21929, 21931 and 21933
- One (1) wave trap WT-1
- One (1) CCVT, CCVT-1
- One (1) 138 kV surge arrester SA-11
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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MEDINA LAKE ONE-LINE DIAGRAM



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- 1. Name: Menger Creek Substation
- 2. Facility Location: The Menger Creek Substation is located at 33115 IH 10, Boerne, Kendall County, Texas 78006.
- 3. **Points of Interconnection:** There are six (6) Points of Interconnection in the Menger Creek Substation generally described as:
 - where the incoming distribution line attaches to the tubular bus between switch MK-61 and switch MK-63 at breaker MK-60.
 - where the jumper from breaker MK-60 connects to the four hole pad on switch MK-59.
 - where the jumper from breaker MK-60 connects to the four hole pad on switch MK-61.
 - where the incoming distribution line attaches to the tubular bus between switch MK-81 and switch MK-83 at breaker MK-80.
 - where the jumper from breaker MK-80 connects to the four holé pad on switch MK-79.
 - where the jumper from breaker MK-80 connects to the four hole pad on switch MK-81.
- 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 transformers are located inside PWT-1, T-1 and in the 12.5 kV operating bus. 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:

BEC owns:

- Two (2) distribution circuits including dead end insulators that attach to the dead end structure, conductors, and hardware
- Three (3) distribution circuit breakers MK-60, MK-70 and MK-80 including jumpers, protective relay packages and foundations
- Three (3) 12.5 kV surge arresters SA-7, SA-9 and SA-13
- One (1) MTU and associated fuse F-5

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LCRA TSC owns:

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

- One (1) circuit switcher CS-18985 with associated bypass switch 18987
- One (1) power transformer PWT-1, T-1 with associated surge arresters
- Eight (8) distribution and total bays including A-frames, trusses, insulators, bus tie switches and disconnect switches, 12.5 kV operating and transfer bus, bus potential transformer, and metering current transformers
- Station service
- Control house with 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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MENGER CREEK ONE-LINE DIAGRAM



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- 1. Name: Pipe Creek Substation
- 2. Facility Location: The Pipe Creek Substation is located at 12362 S. State Hwy 16, Bandera, Bandera County, Texas 78063.
- 3. **Points of Interconnection:** There are no Points of Interconnection in the Pipe Creek Substation
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: N/A
- 7. Metered Voltage and Location: The metering voltage is 12.5 kV. The metering current transformer is located inside PWT-2, T-2. The bus potential transformer is on the 12.5 kV operating bus.
- 8. One Line Diagram Attached: Yes

9. Description of Facilities Owned by Each Party:

BEC owns: The Pipe Creek Substation including all facilities and equipment except that listed as owned by LCRA TSC.

LCRA TSC owns:

- Meter panel (Panel 17)
- Telecom panel (Panel 30)
- RTU panel (Panel 20)
- SCADA interface panels (Panels 18 and 19)
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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PIPE CREEK ONE-LINE DIAGRAM



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- 1. Name: Turtle Creek Substation
- 2. Facility Location: The Turtle Creek Substation is located at 111 FM 1273, Kerrville, Kerr County, Texas 78028.
- 3. **Points of Interconnection:** There is one (1) Point of Interconnection in the Turtle Creek Substation generally described as:
 - where the jumper from the circuit switcher CS8835 bolts to the four hole pad on switch 8834.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 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 inside PWT-1, 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:

BEC owns:

- The Turtle Creek Substation including, but not limited to, the following items:
- One (1) circuit switcher CS-8835 with associated bypass switch 8837
- One (1) power transformer PWT-1, T-1 and 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, bus potential transformer and associated cabling
- Station service

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LCRA TSC owns:

- 138 kV dead-end structures, foundations, insulators and jumpers
- Three (3) 138 kV circuit breakers 8810, 8820 and 8830 including jumpers and protective relay packages
- 138kV operating and transfer bus including structures, foundations and jumpers
- Eleven (11) 138 kV switches 8809, 8811, 8813, 8814, 8819, 8821, 8823, 8829, 8831, 8833 and 8834
- One (1) 138 kV motor operated switch 8812
- Four (4) surge arresters SA-1, SA-2, SA-12 and SA-14
- Two (2) coupling capacitors CC-2 and CC-3
- One (1) CCVT, CCVT-1
- One (1) relaying current transformer CT-6
- Three (3) wave traps and tuners WT-1, WT-2 and WT-3
- One (1) bus potential transformer PT-2
- 138 kV bus including structures, foundations and jumpers
- Control house and battery
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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TURTLE CREEK ONE-LINE DIAGRAM



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- 1. Name: Verde Creek Substation
- 2. Facility Location: The Verde Creek Substation is located at 452 E. Skyline Dr., Center Point, Kerr County, Texas 78010.
- 3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Verde Creek Substation generally described as:
 - where the 138 kV operating bus expansion connector bolts to the four hole pad on switch 5559.
 - where the 138 kV transfer bus expansion connector bolts to the four hole pad on switch 5563.
- 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: Yes
- 9. Description of Facilities Owned by Each Party:

BEC owns:

- 138 kV dead-end structure, foundation, insulators and jumpers (Bay 3)
- One (1) 138 kV circuit breaker 5560BN including jumpers and protective relay package
- Three (3) 138 kV switches 5559, 5561 and 5563
- One (1) CCVT, CCVT-4
- One (1) wave trap and tuner WT-4
- One (1) surge arrester SA-3

LCRA TSC owns:

The Verde Creek substation including but not limited to:

- 138 kV dead-end structures, foundations, insulators and jumpers (except Bay 3)
- 138 kV bus including structures, foundations and jumpers
- Three (3) 138 kV circuit breakers 5540, 5550 and 5570 including jumpers and protective relay packages
- Ten (10) 138 kV switches 2476, 5539, 5541, 5543, 5549, 5551, 5553, 5569, 5571 and 5573

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- Three (3) surge arresters SA-1, SA-2 and SA-4
- One (1) CCVT, CCVT-3
- One (1) coupling capacitor CC-2
- Two (2) wave traps and tuners WT-2 and WT-3
- One (1) circuit switcher CS-2475
- One (1) capacitor bank CP-1
- Two (2) potential transformers PT-1 and PT-2
- Three (3) current transformers CT-1, CT-2 and CT-4
- One (1) single phase current transformer CT-3
- Control house and battery bank
- 10. Operational Responsibilities of Each Party: Each Party is responsible for the operation of the equipment it own.
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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VERDE CREEK ONE-LINE DIAGRAM



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- 1. Name: Welfare Substation
- 2. Facility Location: The Welfare Substation is located at 4554 Forest Trail Dr., Boerne, Kendall County, Texas 78006.
- 3. **Points of Interconnection:** There are two (2) Points of Interconnection in the Welfare Substation generally described as:
 - where the jumper from the 138 kV operating bus bolts to the 4 hole pad on switch 9674.
 - where the jumper from the 138 kV operating bus bolts to the 4 hole pad on switch 9684.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 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. The metering current transformers are located in the total bays for PWT-1, T-1 and PWT-2, T-2. The bus potential transformers are located on both 12.5 kV operating buses.
- 8. One Line Diagram Attached: Yes

9. Description of Facilities Owned by Each Party:

BEC owns:

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

- Two (2) circuit switchers CS-9675 and CS-9685 with associated bypass switches 9676, 9686 and disconnect switches 9674, 9684
- Two (2) power transformers PWT-1, T-1 and PWT-2, T-2 and 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, 12.5 kV operating and transfer bus, bus potential transformers and associated cabling
- Two (2) metering current transformers CT-1 and CT-3
- Control house and battery bank

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- Two (2) station service SS-1 and SS-2
- Six (6) single phase regulators REG-1 and REG-2 with associated surge arresters, disconnect switches and bypass switches

LCRA TSC owns:

- 138 kV dead-end structures, foundations, insulators and jumpers
- 138 kV bus including structures, foundations and jumpers
- Three (3) 138 kV motor operated switches with interrupters MO-9662, 9669 and 9679
- Two (2) metering current transformers CT-2 and CT-4
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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WELFARE ONE-LINE DIAGRAM





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- 1. Name: Bandera Substation
- 2. Facility Location: The Bandera Substation is located at 3414 State Hwy 16 N., Bandera, Bandera County, Texas 78003.
- 3. **Points of Interconnection:** There are no Points of Interconnection in the Bandera Substation.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: N/A
- 7. Metered Voltage and Location: The metering voltage is 12.5 kV. The metering current transformer is located in the PWT-1, T-1 transformer bus. The bus potential transformer is located on both 12.5 kV operating bus.
- 8. One Line Diagram Attached: Yes

9. Description of Facilities Owned by Each Party:

BEC owns: The Bandera Substation including all facilities and equipment except that listed as owned by LCRA TSC.

LCRA TSC owns:

- One (1) capacitor bank CP-1 including structures, foundations, insulators, fuses, and jumpers
- One (1) circuit switcher CS-235 with associated disconnect switch 234
- One (1) current transformer CT-2
- One (1) single phase current transformer CT-3
- One (1) capacitor bank potential transformer PT-4
- One (1) metering current transformer CT-1
- One (1) remote terminal unit (RTU) (panel 30)
- One (1) meter panel (panel 28)
- One (1) capacitor bank control panel (panel 27)
- One (1) supervisory control panel (SIP) (panel 29)
- One (1) communications panel (panel 21)
- Two (2) 25 kV switches BA-69 and BA-71
- 10. Operational Responsibilities of Each Party: Each Party is responsible for the operation of the equipment it owns.

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- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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- 1. Name: Mason Creek Substation
- 2. Facility Location: The Mason Creek Substation is located at 4554 Forest Trail, Bandera, Bandera County, Texas 78003.
- 3. **Points of Interconnection:** There are no Points of Interconnection in the Mason Creek Substation.
- 4. Transformation Services Provided by LCRA TSC: Yes
- 5. Metering Services Provided by LCRA TSC: Yes
- 6. Delivery Voltage: N/A
- 7. Metered Voltage and Location: The metering voltage is 12.5 kV. The metering current transformer is located in the PWT-1, T-1 transformer bus. 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: BEC owns: The Mason Creek Substation including all facilities and equipment except that listed as owned by LCRA TSC.

LCRA TSC owns:

- One (1) metering current transformer CT-1
- Two (2) 12.5 kV switches MC-29 and MC-31
- One (1) 12.5 kV bus potential transformer PT-1 with associated fuse F-2
- One (1) meter panel (panel 15)
- One (1) fiber panel (panel 14)
- One (1) remote terminal unit (RTU) panel (panel 18)
- One (1) supervisory interface panel (SIP) panel (panel 17)
- 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: BEC and LCRA TSC are to share access to the substation by LCRA TSC locks in the gate and in the control house doors.

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MASON CREEK ONE-LINE DIAGRAM



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