

Control Number: 35077



Item Number: 578

Addendum StartPage: 0

PUC Project No. 35077

Amendment No. 1

INTERCONNECTION AGREEMENT

Between

LCRA Transmission Services Corporation

and

Capricorn Ridge Wind II, LLC

and

Bluebell Solar, LLC

Dated August 19, 2015

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FIRST AMENDMENT TO INTERCONNECTION AGREEMENT

This First Amendment ("Amendment") is made and entered into this 2015, by and among the LCRA Transmission Services Corporation ("Transmission Service Provider" or "TSP"), Capricorn Ridge Wind II, LLC ("Generator") and Bluebell Solar, LLC ("Bluebell Solar"), as partial assignee of the rights and obligations of Generator of the Agreement (as defined below) to the extent relating to Bluebell Solar (as defined below), collectively referred to hereinafter as the Parties.

WHEREAS, the Transmission Service Provider and the Generator entered into that certain Generation Interconnection Agreement executed January 15, 2008 (the "Agreement"); and

WHEREAS, the Generator built the Capricorn Ridge Wind IV wind farm to a capacity of 112.5 MW; and

WHEREAS, Bluebell Solar will be a solar generation facility rated at 100 MW and will interconnect into the Generator's existing facilities; and

WHEREAS, both Generator and Bluebell Solar will utilize the same existing Point of Interconnection at the TSP's 345 kV Divide Switchyard; and

WHEREAS, the wind farm and the solar farm cannot be separately metered by the TSP with individual ERCOT polled settlement meters due to their utilization of the same existing Point of Interconnection and will instead by metered in aggregate at the Point of Interconnection; and

WHEREAS, the Generator and/or Bluebell Solar will work with ERCOT to meet the ERCOT Nodal Protocols, Section 10 requirements for Generation Resource Meter Splitting.

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

- 1. Exhibit "C" is deleted in its entirety and the Exhibit "C" attached to this First Amendment is hereby added to the Agreement in lieu thereof.
- 2. Exhibit "C" attached to this First Amendment will become effective upon execution of this First Amendment by the Parties.
- 3. Exhibit "C2" is deleted in its entirety and the Exhibit "C2" attached to this First Amendment is hereby added to the Agreement in lieu thereof.
- 4. Exhibit "C2" attached to this First Amendment will become effective upon execution of this First Amendment by the Parties.

- 5. Exhibit "D" is deleted in its entirety and the Exhibit "D" attached to this First Amendment is hereby added to the Agreement in lieu thereof.
- 6. Exhibit "D" attached to this First Amendment will become effective upon execution of this First Amendment by the Parties.

Except as otherwise expressly provided for herein, the Agreement will continue in full force and effect in accordance with its terms.

IN WITNESS WHEREOF, the Parties have caused this First Amendment to be executed in several counterparts, each of which shall be deemed an original but all shall constitute one and the same instrument.

Capricorn Ridge Wind II, LLC	LCRA Transmission Services Corporation
By: Mill Fle	By brather Greene for R. Pfe fferkon
Name: Michael O'Sullivan Senior Vice President	Name: Ray Pfefferkorn, P.E.
Title:	Title: <u>LCRA Transmission Engineering</u> <u>Manager</u>
Date: 8/17/15	Date: 8/19/15
Bluebell Solar, LLC	
By: Multiple	(PMS)
Name: Michael O'Sullivan	
Senior Vice President Title:	
Date: 8/17/15	

Exhibit "C" Interconnection Details

Amendment No. 1

- 1. Name: Capricorn Ridge Wind IV & Bluebell Solar
- 2. Point of Interconnection location: The Point of Interconnection is located at the TSP's 345 kV Divide Switchyard ("Switchyard") in Coke County. The TSP's 345 kV Switchyard is located approximately 4 miles Southeast of State Highway 158 on the existing LCRA TSC Gasconades Creek to Twin Buttes 345 kV transmission line. The Point of Interconnection shall be the physical point where the TSP's Switchyard facilities are connected to the Generator Interconnection Facilities and more specifically defined as being located at the 4-hole spade terminals on the Generator's 345 kV transmission line dead-end assembly. The interconnection point is detailed in Exhibit "C1" and is shown on the one-line diagram in Exhibit "C2".
- 3. <u>Delivery Voltage</u>: 345 kV
- 4. Number and size of Generating Units: 112.5 MW (nominal) wind plant known as Capricorn Ridge Wind IV will consist of 75 GE wind turbines rated 1.5 MW each. The 100 MW solar generation plant known as Bluebell Solar will consist of 200 SMA solar inverters rated at 0.5 MW each
- 5. Type of Generating Unit: wind turbines and solar inverters (see paragraph 4, above)
- 6. <u>Metering and Telemetry Equipment:</u>
 - a. ERCOT settlement metering will be located at the TSP's 345 kV Switchyard as part of the TSP Interconnection Facilities. 345 kV extended range, wire-wound, current transformers will be used to accurately read the generation energy and power delivered to the grid and the auxiliary energy and power consumed when the generation is off line. 345 kV metering accuracy class voltage transformers will also be installed by the TSP for the ERCOT settlement metering. The ERCOT settlement metering panel furnished by the TSP will be located in the TSP's 345 kV Switchyard. Generator shall have read only access to the ERCOT Polled Settlement meter for the purposes of remotely connecting and downloading meter data in accordance with the ERCOT Requirements.
 - b. LCRA TSC shall follow the ERCOT recommendation to utilize the existing ERCOT Polled Settlement (EPS) metering at LCRA TSC's Divide Switchyard to accommodate the Bluebell Solar project through the existing single Point of Interconnection. The single EPS meter located at the Point of Interconnection will measure all energy flows for the generation site. Allocation of generation to each generating entity will be based on the integrated telemetry signal provided to ERCOT for each generating entity for each 15 minute interval by the Generator's designated Qualified Scheduling Entity.

- c. A multi-ported RTU (remote terminal unit) will be furnished by the TSP at the TSP's 345 kV Switchyard as part of the TIF and will have a dedicated communication port available to provide applicable breaker status, energy and other telemetered data to the Generator's monitoring and control systems. The Generator is responsible for determining and providing all their RTU communications needs.
- d. A multi-ported RTU will be furnished by the Generator or Bluebell Solar at the Generator's transmission substation as part of the GIF and will have a dedicated communication port available to provide breaker status, energy and other telemetered data to the TSP's monitoring and control systems to meet the TSP's needs. The Generator (or Bluebell Solar) will provide a communication path for the TSP's port as described in Item 9 below.
- e. Generator or Bluebell Solar shall, in accordance with ERCOT Requirements and Good Utility Practice, provide, own and maintain the Bluebell Solar switchyard, including a generator step-up transformer and high side protective device. The Generator's or Bluebell Solar's designs along with material and construction specifications shall be reviewed and approved by the TSP prior to commencement of construction of the Bluebell Solar switchyard. Any generation meter splitting, as contemplated in the ERCOT Requirements, will be the responsibility of the Generator and Bluebell Solar.
- f. TSP, at Generator's cost, will provide and own modifications necessary to TSP's protective relaying, metering and SCADA facilities at the TSP's 345 kV Divide Switchyard to accommodate Bluebell Solar. Generator hereby agrees to pay TSP the amount invoiced for these modifications.
- 7. <u>Generator Interconnection Facilities:</u> The Generator or Bluebell Solar will provide, own and maintain as a minimum, the following major equipment for the Generator Interconnection Facilities:
 - 345 kV line with single-mode, fiber optics (OPGW) shield wire and necessary material to dead-end and connect to TSP's dead-end substation structure at the TSP's 345 kV Switchyard
 - A full tension, dead-end, 345 kV line structure located near the TSP's Switchyard property line
 - 345 kV circuit breaker and protective relaying panels at the Generator's collector substation for the Generator's 345 kV line that will coordinate with the TSP's line panels at the TSP's Switchyard for the circuit protection
 - Wind turbine and solar inverter collector substations, including step-up transformers and high-side protective devices for transformer protection
 - A multi-ported RTU and panels to provide breaker status, telemetry and energy data from the Generator's substation to the Plant, the TSP, Generator and ERCOT
 - Fiber optic cable (24 fiber OPGW) or other data communications link acceptable to TSP from Generator's substation control building to the TSP's 345 kV Switchyard control

- building complete with splice cable boxes, facility entry cable and fiber patch panels on both ends for fiber utilization by both Generator and TSP.
- Associated structures, buswork, conductor, connectors, grounding, conduit, control cable, foundation work, perimeter fencing, grading/dirt work and any appurtenances necessary for construction and operation of Generator Interconnection Facilities

The above list is not intended to be a complete list of all facilities that are part of the GIF.

8. <u>Transmission Service Provider Interconnection Facilities:</u> The TIF shall consist of the following:

<u>TSP 345 kV Switchyard:</u> TSP will provide as a minimum, the following major equipment in the TSP's Switchyard:

- ERCOT settlement meters and metering panel
- 3-345 kV Metering Extended Range CT's
- 3-345 kV Metering Class Voltage Transformers
- Dead-end substation structure within TSP's Switchyard for Generator's 345 kV line termination, including line surge arresters
- 345 kV circuit breaker, motor-operated switches and protective relaying panels at the TSP's 345 kV Switchyard for the Generator's 345 kV line.
- A multi-ported RTU and associated panels, to provide TSP and Generator with certain breaker status, telemetry and energy data from the TSP's 345 kV Switchyard

The above lists are not intended to be complete lists of all facilities that are part of the TIF.

- 9. Communications Facilities: Generator shall, in accordance with ERCOT Requirements and Good Utility Practice, provide communications facilities that are, or may in the future be, necessary for effective interconnected operation of the Plant and Generator Interconnection Facilities with the transmission system. The Generator will provide fiber optic communication facilities between the Generator's substation and the TSP's 345 kV Switchyard complete with cable splice boxes, facility entry cable and fiber patch panels on both ends for utilization by both Generator and TSP. The Generator will provide the dedicated channels or fiber pairs for necessary items including Generator's 345 kV line protective relaying, RTU port for TSP, telemetry and voice communications. Voice communications provided by the Generator shall at a minimum include one full business voice circuit in the Generator's substation control building.
- 10. System Protection Equipment: The Plant and the Generator Interconnection Facilities shall be designed to isolate any fault, or to disconnect from or isolate any abnormality that would negatively affect the ERCOT system. The Generator and Bluebell Solar shall be responsible for protection of their own facilities. In particular Generator and Bluebell Solar shall provide relays, circuit breakers, and all other devices necessary to promptly remove any fault contribution of the generation equipment to any short circuit occurring on the TSP system. Such protective equipment shall include, without limitation, a disconnect device or switch with the appropriate interrupting capability to be located

within the Generator Interconnection Facilities and the TSP Interconnection Facilities at a site mutually agreed by both parties. In addition to faults within the Plant and the Generator Interconnection Facilities, Generator and Bluebell Solar shall be responsible for protection of such facilities from such conditions as, over or under frequency, over or under voltage, and uncleared transmission system faults.

The Plant and the Generator Interconnection Facilities shall have protective relaying that is consistent with the protective relaying criteria described in the ERCOT Requirements and NERC standards. If reasonably requested by the TSP, Generator or Bluebell Solar shall, at its expense, provide corrections or additions to existing control and protective equipment required to protect the ERCOT system or to comply with government, industry regulations, or standard changes.

The Generator's or Bluebell Solar's protective relay design shall incorporate the necessary test switches to enable complete functional testing. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and tripping generator units.

Generator or Bluebell Solar shall install sufficient disturbance and fault monitoring equipment to thoroughly analyze all system disturbances of the generation system. This equipment shall monitor the voltages at major nodes of the system, current at major branches, breaker and switch positions, and enough of the dc logic in the relay control scheme to analyze a system disturbance. The TSP shall provide for disturbance and fault monitoring equipment in its 345 kV switchyard. The disturbance and fault monitoring for both Generator and TSP shall be consistent with the disturbance monitoring requirements described in the ERCOT Requirements and NERC standards

Prior to modifying any relay protection system design or relay setting involving the connecting facilities between the two Parties, Generator or Bluebell Solar shall submit the proposed changes to the TSP for review and approval. TSP's review and approval shall be for the limited purpose of determining whether such proposed changes are compatible with the ERCOT transmission system.

In accordance with Good Utility Practice and ERCOT and NERC standards, the TSP shall determine requirements for protection of the Point of Interconnection and the zone of protection around the Point of Interconnection and shall specify and implement protection and control schemes as necessary to meet such requirements. Generator and Bluebell Solar shall have the right to review and comment on the necessary protection requirements, and such comments shall not be unreasonably refused by the TSP when determining such requirements. The TSP shall coordinate the relay system protection between Generator Bluebell Solar and the ERCOT system

- 11. <u>Inputs to Telemetry Equipment:</u> Breaker status, protection status, watts, VARs, voltage and current. Each Party shall provide telemetry and data to ERCOT for the equipment the Party owns, as required by ERCOT for Operations and / or Settlement.
- 12. Supplemental Terms and Conditions:
 - A) Switching and Clearance:

- (a) Generator (or Bluebell Solar) shall obtain prior approval of the TSP before operating any transmission voltage circuit switching apparatus (e.g. switches, circuit breakers, etc.) at the Generator Interconnection Facilities, whether for testing or for operations of the Plant, which approval shall not be unreasonably withheld.
- (b) The TSP shall coordinate switching at the Point of Interconnection. Each Party shall be responsible for operations of their facilities.
- (c) In the event the Generator or Bluebell Solar desires to have the ability to operate any directly connected TSP facilities for emergency operations switching, the TSP will provide transmission switching training to Generator or Bluebell Solar personnel along with a copy of the TSP's transmission operations procedure manual ("Red Book") and any subsequent amendments thereto. Generator and Bluebell Solar personnel or their designated agents that are to perform switching of the directly connected TSP facilities must be on the TSP authorized switching list. Generator, Bluebell Solar and the TSP agree to conduct all switching operations of any directly connected TSP facilities in accordance with the Red Book, as it may be changed by the TSP from time to time.
- (d) Each Party will keep records of maintenance and switching operations of control and protective equipment associated with this interconnection and will allow the other Party reasonable access to inspect such records.
- B) No Retail Sale of Electricity to Generator by TSP: TSP considers the energy and power that the Plant and Generator Interconnection Facilities may from time to time consume from the 345 kV ERCOT grid through the Point of Interconnection to be a retail transaction and as such, the TSP does not intend to be the provider of this retail service. Generator or Bluebell Solar shall make necessary arrangements with the appropriate retail supplier for the energy and power that the Plant and Generator Interconnection Facilities may consume from the 345 kV ERCOT grid through the Point of Interconnection.

C) Notification:

- (a) Upon written request from TSP, Generator and Bluebell Solar shall notify the TSP in writing as to which ERCOT Qualified Scheduling Entity the Plant will be scheduling through.
- (b) Upon written request from TSP, Generator and Bluebell Solar shall supply notification to the TSP identifying their retail service provider prior to the In-Service Date and Generator shall supply notification to the TSP 60 days prior to any changes in retail service provider, thereafter.
- (c) In the event of any interruption of service, TSP shall provide prompt notice to Generator and Bluebell Solar of cause of such interruption and an estimation of when the Plant will be re-connected to the TSP.

13. Special Operating Conditions:

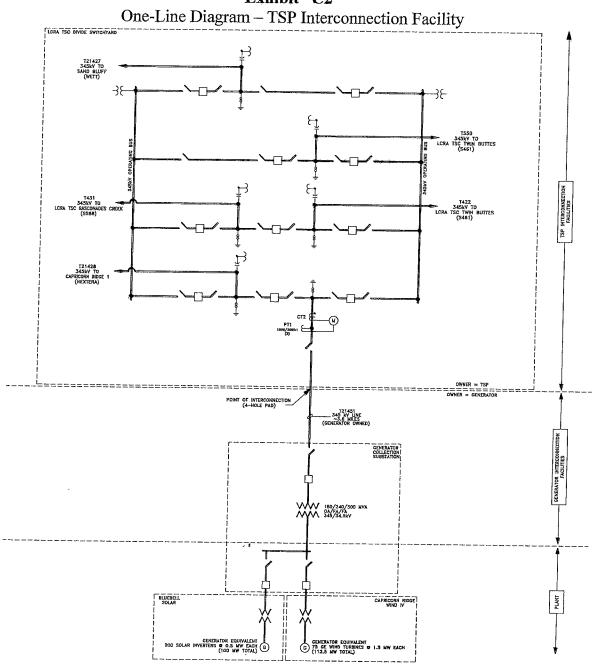
- A) <u>Quality of Power</u>. Generator and Bluebell Solar shall provide a quality of power into the TSP system consistent with the applicable ERCOT Requirements and NERC guidelines.
- B) <u>Harmonics</u>. The Generator's and Bluebell Solar's alternating current generating system must have a frequency of 60 Hz, be designed for balanced three-phase operation, not

cause unreasonable imbalance on the ERCOT system or the TSP Switchyard equipment, and adhere to the recommendations in Institute of Electrical and Electronic Engineers Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems (IEEE 519), or its successor.

C) Voltage, Frequency and Reactive Support.

- (a) Generator and Bluebell Solar shall have and maintain the reactive capability as required in the ERCOT Requirements.
- (b) Generator and Bluebell Solar shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the ERCOT requirements for Voltage Ride Through (VRT) capability.
- D) ERCOT Operating Arrangements. A special ERCOT-approved operating arrangement such as a Remedial Action Plan or Special Protection System may be required either prior to, or after, Commercial Operation. The terms "Remedial Action Plan" and "Special Protection System" shall have the meanings as set forth in the ERCOT Requirements. TSP and ERCOT will examine the need and feasibility of these arrangements in cooperation with the Generator. In the event that ERCOT determines that such an arrangement is required, then TSP, ERCOT, and Generator and Bluebell Solar will cooperate to design and install the necessary facilities, to be operational for the duration of the period where such Remedial Action Plan or Special Protection System may be necessary. This Agreement will be amended to document such arrangement.
- E) Back-up Power during Point of Interconnection Outage. The Generator and Bluebell Solar acknowledges that this Point of Interconnection may not always be available due to maintenance or other outage activities and at these times of unavailability the loss of both generator output and power delivery to the Generator or Bluebell Solar will not be the responsibility of the TSP. The Generator and Bluebell Solar are responsible for providing any back-up power sources that it may require due to the unavailability of this Point of Interconnection for any period of time.
- F) The Parties agree that Bluebell Solar, as partial assignee of the rights and obligations of Generator of the Agreement to the extent relating to Bluebell Solar, shall be entitled to the rights under this Amendment to the extent they relate to Bluebell Solar, and Bluebell Solar assumes any obligation of Generator under this Amendment to the extent relating to Bluebell Solar. Generator, however, agrees that Generator is not relieved from performing such obligations in the event that Bluebell Solar fails to perform such obligations, and Generator agrees to indemnify TSP for any failure by Bluebell Solar to perform such obligations. Bluebell Solar's rights under this Agreement, as partial assignee of the rights and obligations of Generator of this Agreement to the extent relating to Bluebell Solar, are limited to 100 MW that is to be interconnected at the TSP's 345 kV Divide Switchyard.

Exhibit "C2"



M = POINT OF INTERCONNECTION METERING

DATE:		

Exhibit "D"

Notice and EFT Information of the ERCOT Standard Generation Interconnection Agreement

(a) All notices of an operational nature shall be in writing and/or may be sent between the Parties via electronic means including facsimile as follows:

To: Capricorn Ridge Wind IV and Bluebell Solar

Company Name: FPLE Operating Services, Inc.

Attn: Michael Flynn 700 Universe Blvd Juno Beach, FL 33408

Operational/Confirmation Fax: N/A 24 Hour Telephone: (561) 694-3636

E-mail: michael.r.flynn@nexteraenergy.com

(b) Notices of an administrative nature:

To: Capricorn Ridge Wind IV

Company Name: Capricorn Ridge Wind II, LLC

Attn: Director, Business Management

700 Universe Blvd. Juno Beach, FL 33408 Fax: (561) 304-5161 Phone: (561) 304-5833

E-mail: michael j sonnelitter@fpl.com

To: Bluebell Solar

Company Name: Bluebell Solar, LLC. Attn: Director, Business Management

700 Universe Blvd. Juno Beach, FL 33408

Fax: N/A

Phone: (561) 304-5986

E-mail: daniel.gerard@nexteraenergy.com

To: LCRA Transmission Services Corporation

Company Name: LCRA

Attn: Transmission Operations Manager

P.O.Box 220 Austin, TX 78767

Operational/Confirmation Fax: (512) 385-2146

24 Hour Telephone: 1 (800) 223-7622

E-mail: bill.hatfield@lcra.org

To: LCRA Transmission Services Corporation

Company Name: LCRA

Attn: Transmission Engineering Manager

P.O. Box 220 Austin, TX 78767 Fax: (512) 578-4193 Phone: (512) 578-4534

E-mail: ray.pfefferkorn@lcra.org

(c) Notice for statement and billing purposes:			
To: Capricorn Ridge Wind IV	To: LCRA Transmission Services Corporation		
Company Name Capricorn Ridge Wind II, LLC Attn: Director, Business Management 700 Universe Blvd Juno Beach, FL 33408 Phone: (561) 304-5833 E-mail michael j sonnelitter@fpl.com	Company Name: (Same as (b) above)		
To: Bluebell Solar			
Company Name: Bluebell Solar, LLC. Attn: Director, Business Management 700 Universe Blvd. Juno Beach, FL 33408 Fax: N/A Phone: (561) 304-5986 E-mail: daniel.gerard@nexteraenergy.com			
(d) Information concerning Electronic Funds Transfers:			
To: Capricorn Ridge Wind IV	To: LCRA Transmission Services Corporation		
Bank Name: NA City, State	Bank Name: NA		
ABA No.	ABA No		
for credit to	for credit to		
Account No.	Account No.		