

**AGREEMENT FOR THE SALE  
OF ELECTRICAL OUTPUT TO  
VIRGINIA ELECTRIC AND POWER COMPANY**

THIS AGREEMENT, effective this 9<sup>th</sup> day of July, 2015, (the "Effective Date") by and between VIRGINIA ELECTRIC AND POWER COMPANY, a Virginia public service company with its principal office in Richmond, Virginia, doing business in Virginia as Dominion Virginia Power, and in North Carolina as Dominion North Carolina Power, hereinafter called "Dominion North Carolina Power" or "Company", and Long Farm 46 Solar, LLC, a North Carolina limited liability company, with its principal office in Raleigh, North Carolina, hereinafter called "Operator", operator of the Long Farm 46 Solar Facility, hereinafter called the "Facility":

**RECITALS**

WHEREAS, the North Carolina Utilities Commission has adopted a rate schedule described in this Agreement below as **Schedule 19-FP** applicable to Qualifying Facilities (or "QF" as that term is defined in 18 C.F.R. § 292) which can provide Contracted Capacity (a) up to 5000 kW from a hydroelectric generating facility, (b) up to 5000 kW from a generating facility fueled by trash or methane derived from landfills, hog waste, poultry waste, solar, wind or non-animal forms of biomass, or (c) up to 3000 kW for all other QFs; and

WHEREAS, the parties hereto wish to contract for the sale of electrical output from such a QF to be operated by Operator,

NOW THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties hereto contract and agree with each other as follows:

**Article 1: Parties' Purchase and Sale Obligations**

Dominion North Carolina Power or its agent, assignee, or successor will purchase from Operator all of the electrical output (energy and Contracted Capacity) made available for sale from the Facility on an excess sale arrangement. In addition, Operator has elected to contract under the FP Method for determining the Company's avoided cost as described more fully in Exhibit C. Operator elects to operate the Facility in the Mode of Operation as specified in Section IV.C (Firm Mode of Operation) of Schedule 19-FP. The Facility is located in Dominion North Carolina Power's retail service area in Garysburg, Northampton County, North Carolina.

**Article 2: Term and Commercial Operations Date**

This Agreement shall commence on the Effective Date and shall continue in effect for a period of fifteen (15) years from the Commercial Operations Date ("COD"). The COD shall be the first date that all of the following conditions have been satisfied:

- a) The Facility has been permanently constructed, synchronized with and has delivered electrical output to the Dominion North Carolina Power system and such action has been witnessed by an authorized Dominion North Carolina Power employee;
- b) After completion of item a) above, Dominion North Carolina Power has received written notice from Operator specifying the Commercial Operations Date and certifying that the Facility is ready to begin commercial operations as a Qualifying Facility;
- c) Operator and Dominion North Carolina Power (or the PJM Interconnection, LLC or other operator of the Dominion North Carolina Power transmission system, as applicable) have executed an Interconnection Agreement to be included herewith as Exhibit A;
- d) Operator has provided to Dominion North Carolina Power Qualifying Facility Certification to be included herewith as Exhibit E; and
- e) Operator either has received from the North Carolina Utilities Commission a Certificate of Public Convenience and Necessity or has filed the notice required by G.S. 62-110.1(g) and Commission Rule 8-65 and is not legally required to obtain such a certificate for the construction and operation of the Facility.

For contract terms of 10 years or more, this Agreement may be renewed at the option of Dominion North Carolina Power on substantially the same terms and conditions and at a rate either (1) mutually agreed upon by the parties negotiating in good faith and taking into consideration Dominion North Carolina Power's then avoided cost rates and other relevant factors or (2) set by arbitration.

### **Article 3: Contracted Capacity**

The Facility, consisting of solar panels, will have a combined nameplate rating of approximately 5,000 kW. The Facility's Contracted Capacity shall be 5,000 kW net to Company (alternating current or ac).

### **Article 4: Attachments**

The following documents are attached hereto and are made a part hereof:

- Exhibit A: Executed Interconnection Agreement (attached for information but not as a part of this Agreement)
- Exhibit B: General Terms and Conditions
- Exhibit C: Schedule 19-FP, Power Purchases from Cogeneration and Small Power Production Qualifying Facilities and applicable to the QF who chooses the FP Method (effective March 28, 2014, sometimes referred to as "Schedule 19-FP" herein)
- Exhibit D: Map and related written description identifying the specific location of the Facility in the City or County designated in ARTICLE 1
- Exhibit E: "Qualifying Facility" Certification (if Facility is less than 1 MW, Owner submission that the Facility qualifies as a Qualifying Facility (QF) under federal law)
- Exhibit F: Certificate of Public Convenience and Necessity or evidence that no such certificate was required under North Carolina law in the form of a report of proposed construction to the Commission pursuant to Commission Rule 8-65.

### **Article 5: Price**

Payments for all energy and Contracted Capacity purchased hereunder shall be determined by the provisions for payments in Schedule 19-FP included herewith as Exhibit C and pursuant to Operator elections within such Schedule 19-FP, if any, as stated in Article 1 hereof. Payments for all energy and Contracted Capacity purchased hereunder shall be on a cents per kilowatt-hour basis.

If Operator elects the Firm Mode of Operation, then for the term of this Agreement Operator shall be paid for firm energy, in accordance with Schedule 19 – FP, effective for usage on March 28, 2014 (as revised on October 30, 2014), the 15-year Fixed Long-Term Rate as provided for at Section VI.B of Schedule 19-FP. Payments for firm energy will begin on the Commercial Operations Date. All energy delivered per hour above the Contracted Capacity up to 105% of the Contracted Capacity shall be considered non-firm and be paid for at the applicable non-firm rate pursuant to Section V of Schedule 19-FP. No payment shall be made for energy delivered above 105% of the Contracted Capacity. All energy delivered prior to the Commercial Operations Date shall be considered non-firm and paid at the non-firm energy rate. In all cases, such non-firm energy rates will be those in the Schedule 19-FP in effect at the time such energy is delivered.

If Operator elects the Firm Mode of Operation, specified in Section IV.C of Schedule 19-FP, Operator shall be paid for Contracted Capacity on a cents per kilowatt-hour basis as specified in Schedule 19-FP, Section VII. Operator shall not be paid for capacity above the Contracted

Capacity level in any hour during which the generation exceeds the Contracted Capacity level specified in Article 3.

#### **Article 6: Reserved**

#### **Article 7: Operator's Pre-COD Obligations**

After execution of this Agreement and until the Commercial Operations Date, Operator shall prepare a quarterly status report for Dominion North Carolina Power showing the current progress on completing the project. This status report shall be delivered to Dominion North Carolina Power on or before the following dates each year, January 15, April 15, July 15, and October 15. Such status report shall discuss the progress of the project in a format which is acceptable to Dominion North Carolina Power.

The Facility will be considered to have commenced construction on the first day upon which all of the following have occurred: (1) the issuance by Operator to its construction contractor for the Facility of a written unconditional Notice-to-Proceed; (2) the mobilization of major construction equipment and construction facilities on the Facility site; and (3) the commencement of major structural excavation and structural concrete work relating to a major component of the Facility such as the power island consistent with having commenced a continuous process of construction relating to the Facility. Dominion North Carolina Power shall have no obligation to accept a declaration of Commercial Operations prior to July 15, 2015. The anticipated Commercial Operations Date is October 15, 2015.

#### **Article 8: Default and Early Termination**

Operator and Dominion North Carolina Power agree that any of the following will be a material breach by the Operator of this Agreement and shall result in Dominion North Carolina Power having the right to immediate cancellation, without a cure period, of this Agreement: (i) failure to commence construction of the Facility by February 21, 2016, as defined in Article 7 above, and provide Dominion North Carolina Power with written notice thereof (ii) failure to achieve Commercial Operations Date within thirty months of February 21, 2014; provided, however, an Operator may be allowed additional time to begin deliveries of power to the Company if the QF facilities in question are nearly complete at the end of such thirty month period and the QF is able to demonstrate that it is making a good faith effort to complete its project in a timely manner, (iii) failure to provide two (2) consecutive status reports pursuant to Article 7 above, (iv) delivery or supply of electrical output to any entity other than Dominion North Carolina Power or its agent, assignee or successor, (v) failure to meet those requirements necessary to maintain Qualifying Facility status, (vi) failure at any time following COD to have in effect a valid Interconnection Agreement with Dominion North Carolina Power (or its successor as operator of the Dominion North Carolina transmission system), (vii) failure to generate and deliver power from the Facility to Dominion North Carolina Power for more than 180 consecutive days, at any time after the Commercial Operations Date, or (viii) failure to

maintain QF certification. In the event Operator fails to perform in any way, materially or non-materially, any other obligations not specifically listed above, Operator shall be given notice and thirty (30) days to cure such non-performance. Notwithstanding any cure period, Dominion North Carolina Power shall not be obligated to purchase any energy or Contract Capacity under this Agreement while any such breach remains uncured. If Operator fails to cure its non-performance within thirty (30) days of Dominion North Carolina Power's notice, Dominion North Carolina Power shall have the right to cancel this Agreement. Operator agrees that if this Agreement is canceled by Dominion North Carolina Power for Operator's non-performance prior to the end of the initial term of this Agreement, then, Dominion North Carolina Power shall have all rights and remedies available at law or in equity.

### **Article 9: Representations and Warranties**

Operator represents and warrants that it has the right to operate the Facility in accordance with the terms of this Agreement. Operator further represents and warrants that all permits, approvals, and/or licenses necessary for the operation of the Facility will be obtained prior to the Commercial Operations Date and shall be maintained throughout the Term of this Agreement. Operator shall, provide such documentation and evidence of such right, permits, approvals and/or licenses as Dominion North Carolina Power may reasonably request, including without limitation air permits, leases and/or purchase agreements.

### **Article 10: Notices and Payments**

All correspondence and payments concerning this Agreement shall be to the addresses below. Either Party may change the address by providing written notice to the other Party.

**OPERATOR:**

Long Farm 46 Solar, LLC  
176 Mine Lake Court, Suite 100  
Raleigh, NC 27615

**DOMINION NORTH CAROLINA POWER:**

Virginia Electric and Power Company  
Power Contracts (3SE)  
5000 Dominion Boulevard  
Glen Allen, Virginia 23060-6711

### **Article 11: Integration of Entirety of Agreement**

This Agreement is intended by the Parties as the final expression of their Agreement and is intended also as a complete and exclusive statement of the terms of their Agreement with respect to the purchase and sale of electrical output generated by the Facility. All prior written or oral understandings, offers or other communications of every kind pertaining to this Agreement are hereby abrogated and withdrawn.



IN WITNESS WHEREOF, the Parties hereto have caused their names to appear below, signed by authorized representatives as of the date first shown above.

LONG FARM 46 SOLAR, LLC

Heath McLaughlin  
By: Heath McLaughlin

Title: Authorized Individual

Date: June 26, 2015

VIRGINIA ELECTRIC AND POWER COMPANY

William S. [Signature]  
By:

Title: Dir - Power Gen Ops

Date: July 9, 2015

EXHIBIT A  
GENERATOR INTERCONNECTION GUIDANCE AND AGREEMENT

Dominion North Carolina Power's procedures for generator interconnection are available through the Internet at the Company's website with draft interconnection agreements for non-FERC jurisdictional generators (as approved by the NCUC included as Attachments 1, 2 and 3 thereto). For FERC jurisdictional generators interconnection shall be in accordance with FERC and PJM requirements.

The specific Internet address for these procedures is <https://www.dom.com/dominion-north-carolina-power/customer-service/rates-and-tariffs/pdf/term24.pdf>. The Internet site contains links to the Generator Interconnection Procedures along with the Generator Interconnection Request Form. Once an Interconnection Agreement is executed it will be included herewith as part of this Exhibit A.

**EXHIBIT B**  
**General Terms and Conditions**

**I - Assignments**

Operator agrees not to assign this Agreement without the prior written consent of Dominion North Carolina Power. Dominion North Carolina Power may withhold such consent if it determines, in its sole discretion, that such assignment would not be in the best interests of Dominion North Carolina Power or its customers. Any attempted assignment that Dominion North Carolina Power has not approved in writing shall be null and void and ineffective for all purposes. In the event of assignment by Operator, Operator shall pay Company within thirty (30) days of the effective date of the assignment an amount equal to the actual costs incurred by Company in connection with such assignment up to a maximum amount of \$10,000 per assignment; provided, however, assignment of this Agreement by Operator in connection with an initial financing arrangement which is finalized and for which consent of Company is requested within nine months of the Effective Date of this Agreement shall not be subject to the payment requirement provided herein.

**II - Indemnity**

Operator shall indemnify and save harmless and, if requested by Dominion North Carolina Power, defend Dominion North Carolina Power, its officers, directors and employees from and against any and all losses and claims or demands for damages to real property or tangible personal property (including the property of Dominion North Carolina Power) and injury or death to persons arising out of, resulting from, or in any manner caused by the presence, operation or maintenance of any part of Operator's Facility; provided, however, that nothing herein shall be construed as requiring Operator to indemnify Dominion North Carolina Power for any injuries, deaths or damages caused by the sole negligence of Dominion North Carolina Power. Operator agrees to provide Dominion North Carolina Power written evidence of liability insurance coverage, which is specifically and solely for the Facility, prior to the operation of the Facility. Operator agrees to have Dominion North Carolina Power named as an additional insured, and shall keep such coverage current throughout the term of this Agreement.

**III - QF Certification**

Operator represents and warrants that its Facility meets the Qualifying Facility requirements established as of the Effective Date of this Agreement by the Federal Energy Regulatory Commission's rules (18 Code of Federal Regulations Part 292), and that it will continue to meet those requirements necessary to remain a Qualifying Facility throughout the term of this Agreement. [Dominion North Carolina Power may require "FERC" QF Certification by adding the following: "Operator agrees to obtain, at Operator's expense, a certification as a "QF" from the Federal Energy Regulatory Commission, in accordance with 18 C.F.R. § 292.207 (b)."] Operator agrees to provide copies, at the time of submittal, of all correspondence and filings with the Federal Energy Regulatory Commission relating to obtaining certification of the



Facility as a "QF". Operator will submit prior to delivery of electrical output from the Facility to Dominion North Carolina Power evidence of Qualifying Facility certification. After the Commercial Operations Date, if requested by Dominion North Carolina Power prior to March 1 of any year, Operator agrees to provide July 1 of the same year to Dominion North Carolina Power for the preceding year sufficient for Dominion North Carolina Power to determine the Operator's continuing compliance with its QF requirements, including but not limited to:

- (a) All information required by FERC Form 556.
- (b) Copy of the Facility's QF Certification and any subsequent revisions or amendments,
- (c) Provide a copy of any contract executed with a thermal host.
- (d) Identification of the amount of each type of fuel used per month and average heating value for each type of fuel, which will be used to determine the Total Energy Input. These values should be verifiable by auditing supporting documentation.
- (e) Identification of each of the QF's useful thermal output(s) for each month, including temperature, pressure, amount of thermal output delivered, temperature and amount of condensate returned (if applicable) and the conversion to Btus. These values should be verifiable by auditing supporting documentation.
- (f) Identification of the QF's useful power output for each month. These values should be verifiable by auditing supporting documentation.
- (g) Provide drawings, heat balance diagrams and a sufficiently detailed narrative describing the delivery of useful thermal output including the location, description, and calibration data for all metering equipment used for QF calculations.
- (h) Provide any other information which the QF believes will facilitate Dominion North Carolina Power's monitoring of the QF requirements.
- (i) Dominion North Carolina Power may request additional information, as needed, to monitor the QF requirements.

#### IV - Consequential Damages

In no event shall either Party be liable to the other for any special, indirect, incidental or consequential damages whatsoever, except that the foregoing shall not apply to any promises of indemnity or obligations to reimburse the Parties expressly set forth in this Agreement.

#### V - Amendments, Waivers, Severability and Headings

This Agreement, including the appendices thereto, can be amended only by agreement between the Parties in writing. The failure of either Party to insist in any one or more instances upon strict performance of any provisions of this Agreement, or to take advantage of any of its rights hereunder, shall not be construed as a waiver of any such provisions or the relinquishment of any such right or any other right hereunder. In the event any provision of this Agreement, or any part or portion thereof, shall be held to be invalid, void or otherwise unenforceable, the obligations of the Parties shall be deemed to be reduced only as much as may be required to remove the impediment. The headings contained in this Agreement are used solely for convenience and do not constitute a part of the Agreement between the Parties hereto, nor should they be used to aid in any manner in the construction of this Agreement.

#### VI - Compliance with Laws

Operator covenants that it shall comply with all applicable provisions of Executive Order 11246, as amended; § 503 of the Rehabilitation Act of 1973, as amended; § 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974, as amended; and implementing regulations set forth in 41 C.F.R. §§ 60.1, 60-250, and 60-741 and the applicable provisions relating to the utilization of small minority business concerns as set forth in 15 U.S.C. § 637, as amended. Operator agrees that the equal opportunity clause set forth in 41 C.F.R. § 60-1.4 and the equal opportunity clauses set forth in 41 C.F.R. § 250.5 and 41 C.F.R. 60-§741.5 and the clauses relating to the utilization of small and minority business concerns set forth in 15 U.S.C. § 637(d)(3) and 48 C.F.R. § 52-219.9 are hereby incorporated by reference and made a part of this Agreement. If this Agreement has a value of more than \$500,000, Operator shall adopt and comply with a small business and small disadvantaged business subcontracting plan which shall conform to the requirements set forth in 15 U.S.C. § 637(d)(6). The provisions of this section shall apply to Operator only to the extent that:

- (a) such provisions are required of Operator under existing law,
- (b) Operator is not otherwise exempt from said provisions and
- (c) Compliance with said provisions is consistent with and not violative of 42 U.S.C. § 2000 et seq., 42 U.S.C. § 1981 et seq., or other acts of Congress.

#### VII - Interconnection and Operation

Operator shall be responsible for the design, installation, and operation of its Facility. Operator shall be responsible for obtaining an Interconnection Agreement. Interconnection guidelines and agreement requirements are set forth in Exhibit A of this Agreement.

Operator shall: (a) maintain the Facility and the Interconnection Facilities on Operator's side of the Interconnection Point, except Dominion North Carolina Power-owned Interconnection Facilities, in conformance with all applicable laws and regulations and in accordance with operating procedures; (b) obtain any governmental authorizations and permits

required for the construction and operation thereof and keep all such permits and authorizations current and in effect; and (c) manage the Facility in a safe and prudent manner. If at any time Operator does not hold such authorizations and permits, Dominion North Carolina Power may refuse to accept deliveries of power hereunder.

Dominion North Carolina Power may enter Operator's premises (a) to inspect Operator's protective devices at any reasonable time; (b) to read or test meters and metering equipment; and (c) to disconnect, without notice, the Facility if, in Dominion North Carolina Power's opinion, a hazardous condition exists and such immediate action is necessary to protect persons, or Dominion North Carolina Power facilities or other customers' facilities from damage or interference caused by Operator's Facility or lack of properly operating protective devices. Dominion North Carolina Power will endeavor to notify Operator as quickly as practicable if disconnection occurs as provided in (c) above. Any inspection of Operator's protective devices shall not impose on Dominion North Carolina Power any liabilities with respect to the operation, safety or maintenance of such devices.

Operator shall not operate the Facility in parallel with Dominion North Carolina Power's system prior to (a) an inspection of the installed Interconnection Facilities by an authorized Dominion North Carolina Power representative and (b) receiving written authorization from an authorized Dominion North Carolina Power representative to begin parallel operation.

#### VIII - Metering

Dominion North Carolina Power will meter all electrical output delivered from the Facility on the high voltage side of the step up transformer.

Operator agrees to pay an administrative charge to Dominion North Carolina Power to reflect all reasonable costs incurred by Dominion North Carolina Power for meter reading and billing, also referred to as metering charges. The monthly meter reading and billing charge shall change from time to time when the NCUC approves a different charge in Schedule 19-FP.

In addition, Operator agrees to pay any fees required to provide and maintain leased telephone lines required for meter reading by Dominion North Carolina Power.

#### IX - Billing and Payment

Dominion North Carolina Power shall read the meter in accordance with its normal meter reading schedule. Within twenty-eight (28) days thereafter, Dominion North Carolina Power shall send Operator payment for energy and Contracted Capacity delivered. At Dominion North Carolina Power's option, (i) Dominion North Carolina Power may make such payments net of the monthly metering charges, Interconnection Facilities charges, and charges for sales of electricity to the Operator, or (ii) Dominion North Carolina Power may invoice Operator for such charges separately. Payment by Dominion North Carolina Power shall include verification showing the billing month's ending meter reading, on-peak and off-peak kWh, and the amount paid. If in any month the monthly metering and Interconnection Facilities charges are in excess of any payments due Operator, Dominion North Carolina Power shall bill Operator for the

difference and Operator shall make such payment within 28 days of the invoice date. Failure by Operator to make such payments may result in disconnection of the Facility. In no event shall such disconnection relieve Operator of its obligation to pay monthly metering charges and Interconnection Facilities charges under this Agreement.

In the event that any data required for billing purposes hereunder are unavailable when required for such billing, the unavailable data shall be estimated by Dominion North Carolina Power, based upon historical data. Such billing shall be subject to any required adjustment in a subsequent billing month.

Operator agrees that Dominion North Carolina Power shall be entitled to withhold sufficient amounts due pursuant to this Agreement to offset (a) any damages to Dominion North Carolina Power resulting from any breach of this Agreement by Operator, and (b) any other amounts Operator owes Dominion North Carolina Power, including amounts arising from sales of electricity by Dominion North Carolina Power to Operator, metering charges and Interconnection Facilities charges.

In no event shall Dominion North Carolina Power be liable to Operator for any Contracted Capacity payments in excess of the amounts contracted for herein, regardless of the ultimate length of this Agreement or revisions to Schedule 19-FP or successor schedules. Operator hereby agrees to accept the Contracted Capacity payments as set forth herein as its sole and complete compensation for delivery of Contracted Capacity to Dominion North Carolina Power.

#### X - Force Majeure

Neither Party shall be considered in default under this Agreement or responsible to the other Party in tort, strict liability, contract or other legal theory for damages of any description for any interruption or failure of service or deficiency in the quality or quantity of service or any other failure to perform any of its obligations hereunder to the extent such failure occurs without fault or negligence on the part of that Party and is caused by factors beyond that Party's reasonable control, which by the exercise of reasonable diligence that Party is unable to prevent, avoid, mitigate or overcome, including without limitation storm, flood, lightning, earthquake, explosion, equipment failure, civil disturbance, labor dispute, act of God or public enemy, action or inaction of a court or public authority, fire, sabotage, war, explosion, curtailments, unscheduled withdrawal of facilities from operation for maintenance or repair or any other cause of similar nature beyond the reasonable control of that Party (any such event, "Force Majeure"). Solely economic hardship of either Party shall not constitute Force Majeure under this Agreement. Nor shall anything contained in this paragraph or elsewhere in this Agreement excuse Operator or Dominion North Carolina Power from strict compliance with the obligation of the Parties to comply with the terms of Article IX of this Exhibit B relating to timely payments.

Each Party shall have the obligation to operate in accordance with Good Utility Practice (as defined below) at all times and to use due diligence to overcome and remove any cause of failure to perform.

If a Party relies on the occurrence of an event of Force Majeure described above as a basis for being excused from performance of its obligations under this Agreement, then the Party relying on the Force Majeure event shall:

- a) Provide within forty-eight (48) hours written notice of such Force Majeure event or potential Force Majeure to the other Party, giving an estimate of its expected duration and the probable impact on the performance of its obligations hereunder;
- b) Exercise all reasonable efforts to continue to perform its obligations under this Agreement;
- c) Expeditiously take action to correct or cure the Force Majeure event excusing performance; provided, however, that settlement of strikes or other labor disputes will be completely within the sole discretion of the Party affected by such strike or labor dispute;
- d) Exercise all reasonable efforts to mitigate or limit damages to the other Party; and
- e) Provide prompt notice to the other Party of the cessation of the Force Majeure event giving rise to its excuse from performance. All performance obligations hereunder shall be extended by a period equal to the term of the resultant delay.

If a Party responding to a Force Majeure event has the ability to obtain, for additional expenditures, expedited material deliveries or labor production which would allow a response to the event in a manner that is above and beyond Good Utility Practice, and such a response could shorten the duration of the Force Majeure event, the Party responding to the event may, at its discretion, present the other Party with the option of funding the expenditures for expediting material deliveries or labor production in an effort to reduce the duration of the event and economic hardship. Each such opportunity will be negotiated on a case-by-case basis by the Parties.

For purposes of this Agreement, "Good Utility Practice" shall mean any of the applicable practices, methods, standards, guides or acts: required by any governmental authority, regional or national reliability council, or national trade organization, including NERC, SERC, or the successor of any of them, as they may be amended from time to time whether or not the Party whose conduct is at issue is a member thereof; otherwise engaged in or approved by a significant portion of the electric utility industry during the relevant time period which in the exercise of reasonable judgment in light of the facts known or that should have been known at the time a decision was made, could have been expected to accomplish the desired result in a manner consistent with law, regulation, good business practices, generation, transmission and distribution reliability, safety, environmental protection, economy and expediency. Good Utility Practice is intended to be acceptable practices, methods, or acts generally accepted in the region,



or any other acts or practices as are reasonably necessary to maintain the reliability of the Transmission System (as defined in the Interconnection Agreement), or of the Facility, and is not intended to be limited to the optimum practices, methods, or acts to the exclusion of all others.

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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OFFICIAL COPY

Mar 30 2016

I. APPLICABILITY AND AVAILABILITY

This schedule is applicable to any qualifying Cogenerator or Small Power Producer (Qualifying Facility) which desires to deliver all of its net electrical output to the Company, has either (1) generating facilities designated as new capacity as defined by 18 C.F.R. § 292.304(b)(1), or (2) hydroelectric generating facilities that meet the criteria of being owned or operated by a small power producer as defined in G.S. 62-3(27a), and enters into an agreement for the sale of net electrical output to the Company (Agreement).

Unless otherwise provided by a Commission order setting forth different availability dates, this schedule is available to any Qualifying Facility (otherwise eligible pursuant to the terms hereof) that by November 1, 2014 or the date upon which proposed rates are filed in Docket No. E-100 Sub 140, if later than November 1, 2014, (a) has obtained a certificate of public convenience and necessity for its facility from the Commission or filed a report of proposed construction with the Commission pursuant to Commission Rule 8-65, and (b) has indicated to the Company in writing that it is committed to selling the output of the facility to the Company pursuant to the terms of this schedule.

Where the Qualifying Facility (QF) elects to be compensated for firm deliveries in accordance with this schedule, the amount of capacity under contract and the initial term of contract shall be limited as follows:

- A. Where the QF operates hydroelectric generating facilities that meet the criteria of being owned or operated by a small power producer as defined in G.S. 62-3(27a), or where the QF operates non-hydroelectric QFs fueled by trash or methane derived from landfills, hog waste, poultry waste, solar, wind, and non-animal forms of biomass, the amount of capacity subject to compensation shall be no greater than 5,000 kW, and the amount of energy purchased during a given hour at rates applicable to firm deliveries shall be no greater than 5,000 kWh. The initial term of contract for such a QF shall be for a period of 5, 10, or 15 years, at the option of the QF.
- B. Where the QF is not defined under Paragraph I.A., the amount of capacity subject to compensation shall be no greater than 3,000 kW, and the amount of energy purchased during a given hour at rates applicable to firm deliveries shall be no greater than 3,000 kWh. The initial term of contract for such a QF shall be for a period of 5 years.

(Continued)

Filed 10-30-14  
Electric-North Carolina

Amending Filing Effective For Usage On and After  
03-28-14. This Filing Effective For Usage On and  
After 03-28-14.

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

I. APPLICABILITY AND AVAILABILITY (Continued)

Where the QF elects to be compensated for firm or non-firm deliveries in accordance with this schedule, the QF must begin deliveries to the Company within thirty months of February 21, 2014 to retain eligibility for the rates contained in this schedule; provided, however, a QF may be allowed additional time to begin deliveries of power to the Company if the QF facilities in question are nearly complete at the end of such thirty month period and the QF is able to demonstrate that it is making a good faith effort to complete its project in a timely manner. Where the QF elects an initial contract term of 10 or more years, such contract may be renewed for subsequent term(s), at the Company's option, based on substantially the same terms and provisions and at a rate either (1) mutually agreed upon by the parties negotiating in good faith and taking into consideration the Company's then avoided cost rates and other relevant factors or (2) set by arbitration.

This schedule is not applicable to a QF owned by a developer, or affiliate of a developer, who sells power to the Company from another facility located within one-half mile unless: (1) each facility provides thermal energy to different, unaffiliated hosts; (2) each facility provides thermal energy to the same host, and the host has multiple operations with distinctly different or separate thermal needs; or (3) each facility utilizes a renewable resource which may be subject to geographic siting limitations, such as hydroelectric, solar, or wind power facilities.

II. MONTHLY BILLING TO THE QF

All sales to the QF will be in accordance with any applicable filed rate schedule. In addition, where the QF contracts for sales to the Company, the QF will be billed a monthly charge equal to one of the following to cover the cost of meter reading and processing:

(Continued)

Filed 10-30-14  
Electric-North Carolina

Amending Filing Effective For Usage On and After  
03-28-14. This Filing Effective For Usage On and  
After 03-28-14.

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

II. MONTHLY BILLING TO THE QF (Continued)

<u>Metering required</u>	<u>Charge</u>
One non-time-differentiated meter	\$17.24
One time-differentiated meter	\$35.55
Two time-differentiated meters	\$41.16

III. DEFINITION OF ON- AND OFF-PEAK HOURS

A. For Option A Rates the On-Peak Hours are:

Summer

- (i) For the periods beginning at 12:00 midnight March 31 and ending at 12:00 midnight September 30:

The on-peak hours are defined as the hours between 10:00 am and 10:00 pm., Monday through Friday, excluding holidays considered as off-peak.

Non-Summer

- (ii) For the periods beginning at 12:00 midnight September 30 and ending at 12:00 midnight March 31:

The on-peak hours are defined as those hours between 6:00 am and 1:00 pm., plus 4:00 p.m. through 9:00 p.m., Monday through Friday, excluding holidays considered as off-peak.

(Continued)

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

III. DEFINITION OF ON- AND OFF-PEAK HOURS (Continued)

B. For Option B Rates the On-Peak Hours are:

Summer

- (i) For the periods beginning at 12:00 midnight May 31 and ending at 12:00 midnight September 30:

The on-peak hours are defined as the hours between 1:00 pm and 9:00 pm., Monday through Friday, excluding holidays considered as off-peak.

Non-Summer

- (ii) For the periods beginning at 12:00 midnight September 30 and ending at 12:00 midnight May 31:

The on-peak hours are defined as those hours between 6:00 am and 1:00 pm. Monday through Friday, excluding holidays considered as off-peak.

C. Off-Peak Hours:

The off-peak hours in any month are defined as all hours not specified above as on-peak hours. All hours for the following holidays will be considered as off-peak: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the day after Thanksgiving, and Christmas Day. When one of the above holidays falls on a Saturday, the Friday before the holiday will be considered off-peak; when the holiday falls on a Sunday, the following Monday will be considered off-peak.

(Continued)



Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

IV. CONTRACT OPTIONS FOR DESIGNATING MODE OF OPERATION

The QF shall designate under contract its Mode of Operation from the following options, each of which determines the Company's method of payment.

- A. The QF may contract for the delivery of energy to the Company without reimbursement, designated as the Non-reimbursement Mode of Operation; or,
- B. The QF may contract for the delivery of non-firm energy to the Company (no payment for capacity). This option includes QFs that elect to contract to deliver non-firm energy to the Company on an as-available basis. Where the QF's generation facilities have an aggregate nameplate rating of 100 kW or less the QF may designate the Non-firm, Non-time-differentiated Mode of Operation. Regardless of nameplate rating the QF may designate the Non-firm, Time-differentiated Mode of Operation.
- C. The QF may contract for the delivery of firm energy and capacity to the Company. The level of capacity which the QF contracts to sell to the Company shall not exceed 5,000 kW, where the QF is defined under Paragraph I.A., or 3,000 kW otherwise. This capacity level, in kW, shall be referred to as the Contracted Capacity. When the QF elects to sell firm energy and capacity, the QF shall designate the Firm Mode of Operation.

V. PAYMENT FOR COMPANY PURCHASES OF NON-FIRM ENERGY

The QF may contract to receive payment for energy at rates to be determined with each revision of this schedule. These rates will be based upon the QF's Mode of Operation as described below. There are no capacity payments for the QFs that contract for non-firm energy.

(Continued)

Filed 10-30-14  
Electric-North Carolina

Amending Filing Effective For Usage On and After  
03-28-14. This Filing Effective For Usage On and  
After 03-28-14.

Schedule 19 - FP  
POWER PURCHASES FROM  
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QUALIFYING FACILITIES

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(Continued)

V. PAYMENT FOR COMPANY PURCHASES OF NON-FIRM ENERGY  
(Continued)

- A. Non-reimbursement Mode of Operation. Where the QF designates the Non-Reimbursement Mode of Operation, no payment will be made for energy delivered.
- B. Non-time-differentiated Mode of Operation. Where the QF's generation facilities have an aggregate nameplate rating of 100 kW or less and the QF designates the Non-Firm, Non-time-differentiated Mode of Operation, the following rates in cents per kWh are applicable:

3.843

- C. Time-differentiated Mode of Operation. Where the QF designates the Time-differentiated Mode of Operation, the following On- and Off-peak rates in cents per kWh are applicable:

On-peak	4.541
Off-peak	3.455

All energy purchase rates will be further increased by 3.0% to account for line losses avoided by the Company, except that upon the effective date of any Schedule 19 that is subsequently amended and approved by the Commission, the line loss percentage applied shall be the percentage stated in the then-current Schedule 19. In lieu of 3.0% or the line loss percentage stated in the then-current Schedule 19, the QF may request that a site specific line loss percentage be determined with the QF bearing the cost of the study required.

(Continued)

Filed 10-30-14  
Electric-North Carolina

Amending Filing Effective For Usage On and After  
03-28-14. This Filing Effective For Usage On and  
After 03-28-14.

Schedule 19 - FP  
POWER PURCHASES FROM  
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QUALIFYING FACILITIES

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(Continued)

VI. PAYMENT FOR COMPANY PURCHASES OF FIRM ENERGY

QFs designating the Firm Mode of Operation will be eligible to receive purchase payments for the delivery of firm energy by the QF to the Company. The QF may contract to receive payments for firm energy based on A or B, below. Contract terms for 10 or 15 years are available only where the QF is defined under Paragraph I.A.

The QF may contract to receive payment for firm time-differentiated energy at rates to be determined with each revision of this schedule (Variable Rate). These rates in cents per kWh, which reflect the Company's estimated avoided energy cost for delivery of firm energy during 2013 or 2014, are as shown in the price tables below:

- A. Option A: The QF may contract to receive energy purchase payments for the delivery of firm energy based upon fixed prices, as shown below in cents per kWh:

		<u>Fixed Long-Term Rate</u>		
	<u>Variable Rate</u>	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh)	4.541	5.055	5.526	5.813
Off-Peak (¢/kWh)	3.455	3.964	4.388	4.661

- B. Option B: The QF may contract to receive energy purchase payments for the delivery of firm energy based upon fixed prices, as shown below in cents per kWh:

(Continued)

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

VI. PAYMENT FOR COMPANY PURCHASES OF FIRM ENERGY (Continued)

		<u>Fixed Long-Term Rate</u>		
	<u>Variable Rate</u>	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh)	4.663	5.194	5.675	5.962
Off-Peak (¢/kWh)	3.614	4.119	4.549	4.824

Any energy delivered above 100% up to 105% of QF's Contracted Capacity in any hour will be purchased at the then applicable non-firm energy rates under Schedule 19-FP. There will be no reimbursement for any energy delivered above 105% of QF's Contracted Capacity.

All energy purchase rates will be further increased by 3.0% to account for line losses avoided by the Company, except upon the effective date of any Schedule 19 that is subsequently amended and approved by the Commission, the line loss percentage applied shall be the percentage stated in the then-current Schedule 19. In lieu of 3.0% or the line loss percentage stated in the then-current Schedule 19, the QF may request that a site specific line loss percentage be determined with the QF bearing the cost of the study required.

VII. PAYMENT FOR COMPANY PURCHASES OF CAPACITY

Company purchases of capacity are applicable only where the QF elects the Firm Mode of Operation. Capacity payments are applicable during on-peak hours only. Such QFs shall receive capacity purchase payments based on the applicable levelized capacity purchase price below, in cents per kWh, corresponding to the contract length in years. Contract terms for 10 or 15 years are available only where the QF is defined under Paragraph I.A.

Schedule 19 - FP  
POWER PURCHASES FROM  
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QUALIFYING FACILITIES

(Continued)

VII. PAYMENT FOR COMPANY PURCHASES OF CAPACITY (Continued)

**Option A:**

For hydroelectric facilities with no storage capability and no other type of generation:

	<u>Capacity Price</u>		
	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh) Summer	5.895	6.095	6.263
On-Peak (¢/kWh) Non-summer	3.930	4.063	4.175

For all other facilities:

	<u>Capacity Price</u>		
	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh) Summer	3.537	3.657	3.758
On-Peak (¢/kWh) Non-summer	2.358	2.438	2.505

**Option B:**

For hydroelectric facilities with no storage capability and no other type of generation:

	<u>Capacity Price</u>		
	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh) Summer	13.524	13.982	14.368
On-Peak (¢/kWh) Non-summer	5.214	5.390	5.539

For all other facilities:

	<u>Capacity Price</u>		
	<u>5-Year</u>	<u>10-Year</u>	<u>15-Year</u>
On-Peak (¢/kWh) Summer	8.115	8.389	8.621
On-Peak (¢/kWh) Non-summer	3.128	3.234	3.323

Filed 10-30-14  
Electric-North Carolina

Amending Filing Effective For Usage On and After  
03-28-14. This Filing Effective For Usage On and  
After 03-28-14.



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QUALIFYING FACILITIES

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(Continued)

VII. PAYMENT FOR COMPANY PURCHASES OF CAPACITY (Continued)

Payments will be made to the QF by applying the appropriate levelized capacity purchase price above to all kWh delivered to the Company during each on-peak hour, up to the 100% of the Contracted Capacity in such hour. There will be no compensation for capacity in excess of the QF's Contracted Capacity in an hour. This capacity price will be in accordance with the length of rate term for capacity sales so established in the contract.

VIII. PROVISIONS FOR COMPANY PURCHASE OF THE QF GENERATION

- A. The QF shall own and be fully responsible for the costs and performance of the QF's:
  - 1. Generating facility in accordance with all applicable laws and governmental agencies having jurisdiction;
  - 2. Control and protective devices as required by the Company on the QF's side of the meter.
- B. The sale of power to the Company by a QF at avoided cost rates pursuant to this Schedule 19-FP does not convey ownership to the Company of the renewable energy credits or green tags associated with the QF facility.
- C. Upon request by the Company, the Cogenerator or Small Power Producer must demonstrate that the facility is a Qualifying Facility as defined by PURPA.
- D. Interconnection procedures for the QF's generation interconnection are provided through the Internet at the Company's website;  
<http://www.dom.com/dominion-north-carolina-power/customer-service/rates-and-tariffs/pdf/term24.pdf>.

Schedule 19 - FP  
POWER PURCHASES FROM  
COGENERATION AND SMALL POWER PRODUCTION  
QUALIFYING FACILITIES

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(Continued)

IX. MODIFICATION OF RATES AND OTHER PROVISIONS HEREUNDER

The provisions of this schedule, including the rates for purchase of energy and Contracted Capacity by the Company, are subject to modification at any time in the manner prescribed by law, and when so modified, shall supersede the rates and provisions hereof. However, payments to QFs with contracts for a specified term at payments established at the time the obligation is incurred shall remain at the payment levels established in their contract with the exception of the line loss percentage applied which shall be the percentage stated in the then-current Schedule 19.

If the QF terminates its contract to provide Contracted Capacity and energy to the Company prior to the expiration of the contract term, the QF shall, in addition to other liabilities, be liable to the Company for excess capacity and energy payments.

Such excess payments will be calculated by taking the difference between (1) the total capacity and energy payments already made by the Company to the QF and (2) capacity and energy payments calculated based on the levelized capacity and energy purchase price found in Paragraph VI and VII corresponding to the highest term option completed by the QF. These excess payments shall also include interest, from the time such excess payments were made, compounded annually at the rate equal to the Company's most current issue of long-term debt at the time of the contract's effective date.

X. TERM OF CONTRACT

The term of contract shall be such as may be mutually agreed upon but for not less than one year.



## EXHIBIT C

Exhibit C is a copy of Schedule 19-FP.

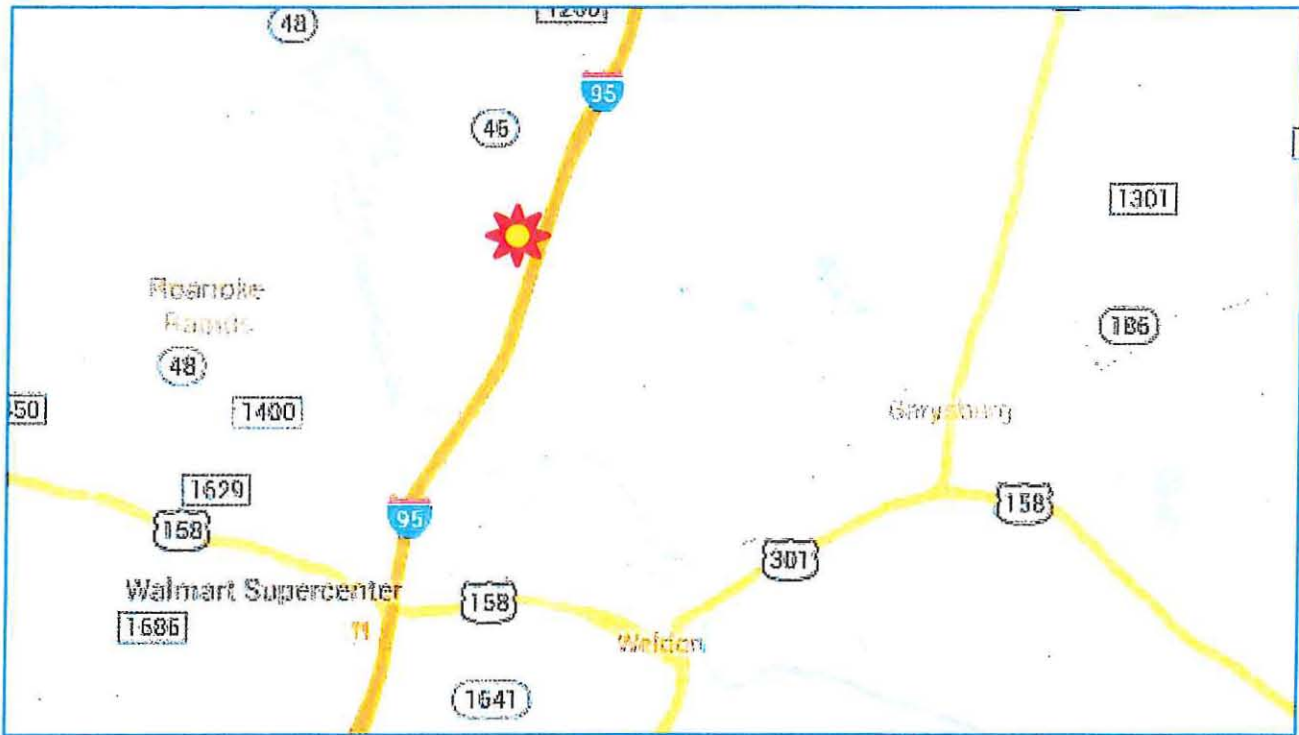
## EXHIBIT D

Exhibit D is a map and written description identifying the specific location of the Facility and is provided by the Operator.



## Exhibit A

Hwy 46, Garysburg NC 27831  
[Northampton County]



OFFICIAL COPY

Sep 22 2014

OFFICIAL COPY

Mar 30 2016



**OFFICIAL COPY**

Mar 30 2016

In the Matter of  
Application of Long Farm 46 Solar, LLC,                     )  
for a Certificate of Public Convenience and                 )  
Necessity to Construct a 5-MW Solar Facility             )  
in Northampton County, North Carolina                   )

ORDER ISSUING CERTIFICATE

On September 24, 2014, the Commission issued an Order Requiring Publication of Notice.

On October 15, 2014, the Applicant filed an affidavit of publication from the Roanoke-Chowan News-Herald stating that the publication of notice was completed on October 14, 2014. No complaints have been received.

The Public Staff presented this matter to the Commission at its Regular Staff Conference on November 24, 2014. The Public Staff stated that it had reviewed the application and determined it to be in compliance with the requirements of G.S. 62-110.1(a) and Commission Rule R8-64. Therefore, the Public Staff recommended issuance of the requested certificate for the facility.

Based upon the foregoing, and the recommendation of the Public Staff, the Commission finds good cause to approve the application and issue the requested certificate.

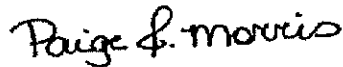
IT IS, THEREFORE, ORDERED as follows:

1. That the application filed by Long Farm 46 Solar, LLC, for a certificate of public convenience and necessity shall be, and is hereby, approved.
2. That Appendix A shall constitute the certificate of public convenience and necessity issued to Long Farm 46 Solar, LLC, for the 5-MW<sub>AC</sub> solar photovoltaic electric generating facility located in Northampton County, on NC Highway 46 near Long Farm Road, near Garysburg, North Carolina.

ISSUED BY ORDER OF THE COMMISSION.

This the 26<sup>th</sup> day of November, 2014.

NORTH CAROLINA UTILITIES COMMISSION



Paige J. Morris, Deputy Clerk

STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH

DOCKET NO. SP-4313, SUB 0

Long Farm 46 Solar, LLC  
176 Mine Lake Court, Suite #100  
Raleigh, North Carolina 27615

is hereby issued this

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY  
PURSUANT TO G.S. 62-110.1

for a 5-MW<sub>AC</sub> solar photovoltaic electric generating facility

located

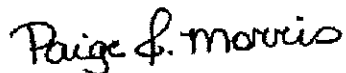
in Northampton County,  
on NC Highway 46 near Long Farm Road, near Garysburg, North Carolina,

subject to all orders, rules, regulations and conditions  
as are now or may hereafter be lawfully made  
by the North Carolina Utilities Commission.

ISSUED BY ORDER OF THE COMMISSION.

This the 26<sup>th</sup> day of November, 2014.

NORTH CAROLINA UTILITIES COMMISSION



Paige J. Morris, Deputy Clerk

Mar 30 2016

OFFICIAL COPY

## EXHIBIT F

Exhibit F is the Certificate of Public Convenience and Necessity to be provided by the Operator, or evidence that no such certificate is required under North Carolina law in the form of a report of proposed construction to the Commission pursuant to Commission Rule 8-65.



## EXHIBIT E

Exhibit E is the "Qualifying Facility" Certification to be provided by the Operator.

OR

If Facility is less than 1MW, Owner may submit the following statement as Exhibit E that the Facility qualifies as a Qualifying Facility (QF) under federal law.

Federal law exempts small power production or cogeneration facilities with net power production capacities of 1 MW or less from certain certification requirements in order to qualify as a qualifying facility ("QF" or "Qualifying Facility"). Therefore, [QF Name Here] submits the Facility is exempt from the certification requirements, but submits that the Facility qualifies as a Qualifying Facility under federal law set forth in the Public Utility Regulatory Policies Act of 1978 ("PURPA") (codified at 16 U.S.C. § 824a-3).

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Name

---

Title

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, DC

OMB Control # 1902-0075  
Expiration 5/31/2013

# Form 556

Certification of Qualifying Facility (QF) Status for a Small Power  
Production or Cogeneration Facility

OFFICIAL COPY

Mar 30 2016

Application Information

**1a** Full name of applicant (legal entity on whose behalf qualifying facility status is sought for this facility)  
LONG FARM 46 SOLAR, LLC

**1b** Applicant street address  
176 Mine Lake Court, Suite #100

**1c** City  
Raleigh

**1d** State/province  
NC

**1e** Postal code  
27615

**1f** Country (if not United States)

**1g** Telephone number  
(321) 202-3600

**1h** Has the instant facility ever previously been certified as a QF? Yes ☐ No ☒

**1i** If yes, provide the docket number of the last known QF filing pertaining to this facility: QF \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

**1j** Under which certification process is the applicant making this filing?

☒ Notice of self-certification  
(see note below)

☐ Application for Commission certification (requires filing  
fee; see "Filing Fee" section on page 3)

Note: a notice of self-certification is a notice by the applicant itself that its facility complies with the requirements for QF status. A notice of self-certification does not establish a proceeding, and the Commission does not review a notice of self-certification to verify compliance. See the "What to Expect From the Commission After You File" section on page 3 for more information.

**1k** What type(s) of QF status is the applicant seeking for its facility? (check all that apply)

☒ Qualifying small power production facility status

☐ Qualifying cogeneration facility status

**1l** What is the purpose and expected effective date(s) of this filing?

☒ Original certification; facility expected to be installed by 11/15/15 and to begin operation on 12/15/15

☐ Change(s) to a previously certified facility to be effective on \_\_\_\_\_  
(identify type(s) of change(s) below, and describe change(s) in the Miscellaneous section starting on page 19)

☐ Name change and/or other administrative change(s)

☐ Change in ownership

☐ Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output

☐ Supplement or correction to a previous filing submitted on \_\_\_\_\_  
(describe the supplement or correction in the Miscellaneous section starting on page 19)

**1m** If any of the following three statements is true, check the box(es) that describe your situation and complete the form to the extent possible, explaining any special circumstances in the Miscellaneous section starting on page 19.

☐ The instant facility complies with the Commission's QF requirements by virtue of a waiver of certain regulations previously granted by the Commission in an order dated \_\_\_\_\_ (specify any other relevant waiver orders in the Miscellaneous section starting on page 19)

☐ The instant facility would comply with the Commission's QF requirements if a petition for waiver submitted concurrently with this application is granted

☐ The instant facility complies with the Commission's regulations, but has special circumstances, such as the employment of unique or innovative technologies not contemplated by the structure of this form, that make the demonstration of compliance via this form difficult or impossible (describe in Misc. section starting on p. 19)

<b>Contact Information</b>	<b>2a Name of contact person</b> Heath McLaughlin		<b>2b Telephone number</b> (321) 202-3600	
	<b>2c Which of the following describes the contact person's relationship to the applicant? (check one)</b> <input type="checkbox"/> Applicant (self) <input checked="" type="checkbox"/> Employee, owner or partner of applicant authorized to represent the applicant <input type="checkbox"/> Employee of a company affiliated with the applicant authorized to represent the applicant on this matter <input type="checkbox"/> Lawyer, consultant, or other representative authorized to represent the applicant on this matter			
	<b>2d Company or organization name (if applicant is an individual, check here and skip to line 2e)</b> <input type="checkbox"/> LONG FARM 46 SOLAR, LLC			
	<b>2e Street address (if same as Applicant, check here and skip to line 3a)</b> <input checked="" type="checkbox"/>			
	<b>2f City</b>		<b>2g State/province</b>	
	<b>2h Postal code</b>		<b>2i Country (if not United States)</b>	
<b>Facility Identification and Location</b>	<b>3a Facility name</b> LONG FARM 46 SOLAR, LLC			
	<b>3b Street address (if a street address does not exist for the facility, check here and skip to line 3c)</b> <input type="checkbox"/> 6756 NC 46 Hwy			
	<b>3c Geographic coordinates:</b> If you indicated that no street address exists for your facility by checking the box in line 3b, then you must specify the latitude and longitude coordinates of the facility in degrees (to three decimal places). Use the following formula to convert to decimal degrees from degrees, minutes and seconds: decimal degrees = degrees + (minutes/60) + (seconds/3600). See the "Geographic Coordinates" section on page 4 for help. If you provided a street address for your facility in line 3b, then specifying the geographic coordinates below is optional.  Longitude <input type="checkbox"/> East (+) _____ degrees      Latitude <input type="checkbox"/> North (+) _____ degrees <input type="checkbox"/> West (-) _____ degrees <input type="checkbox"/> South (-) _____ degrees			
	<b>3d City (if unincorporated, check here and enter nearest city)</b> <input type="checkbox"/> Garysburg		<b>3e State/province</b> NC	
	<b>3f County (or check here for independent city)</b> <input type="checkbox"/> Northampton		<b>3g Country (if not United States)</b>	
<b>Transacting Utilities</b>	<b>Identify the electric utilities that are contemplated to transact with the facility.</b>			
	<b>4a Identify utility interconnecting with the facility</b> Dominion North Carolina Power			
	<b>4b Identify utilities providing wheeling service or check here if none</b> <input checked="" type="checkbox"/>			
	<b>4c Identify utilities purchasing the useful electric power output or check here if none</b> <input type="checkbox"/> Dominion North Carolina Power			
	<b>4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none</b> <input type="checkbox"/> Dominion North Carolina Power			

## Ownership and Operation

**5a** Direct ownership as of effective date or operation date: Identify all direct owners of the facility holding at least 10 percent equity interest. For each identified owner, also (1) indicate whether that owner is an electric utility, as defined in section 3(22) of the Federal Power Act (16 U.S.C. 796(22)), or a holding company, as defined in section 1262(8) of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451(8)), and (2) for owners which are electric utilities or holding companies, provide the percentage of equity interest in the facility held by that owner. If no direct owners hold at least 10 percent equity interest in the facility, then provide the required information for the two direct owners with the largest equity interest in the facility.

Full legal names of direct owners	Electric utility or holding company	If Yes, % equity interest
1) LONG FARM 46 SOLAR, LLC	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	%
2)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
3)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
4)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
5)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
6)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
7)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
8)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
9)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%
10)	Yes <input type="checkbox"/> No <input type="checkbox"/>	%

☐ Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed

**5b** Upstream (i.e., indirect) ownership as of effective date or operation date: Identify all upstream (i.e., indirect) owners of the facility that both (1) hold at least 10 percent equity interest in the facility, and (2) are electric utilities, as defined in section 3(22) of the Federal Power Act (16 U.S.C. 796(22)), or holding companies, as defined in section 1262(8) of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451(8)). Also provide the percentage of equity interest in the facility held by such owners. (Note that, because upstream owners may be subsidiaries of one another, total percent equity interest reported may exceed 100 percent.)

Check here if no such upstream owners exist. ☒

Full legal names of electric utility or holding company upstream owners	% equity interest
1)	%
2)	%
3)	%
4)	%
5)	%
6)	%
7)	%
8)	%
9)	%
10)	%

☐ Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed

**5c** Identify the facility operator

LONG FARM 46 SOLAR, LLC

Energy Input

**6a** Describe the primary energy input: (check one main category and, if applicable, one subcategory)

- ☐ Biomass (specify)  
☐ Landfill gas  
☐ Manure digester gas  
☐ Municipal solid waste  
☐ Sewage digester gas  
☐ Wood  
☐ Other biomass (describe on page 19)  
☐ Waste (specify type below in line 6b)
- ☒ Renewable resources (specify)  
☐ Hydro power - river  
☐ Hydro power - tidal  
☐ Hydro power - wave  
☒ Solar - photovoltaic  
☐ Solar - thermal  
☐ Wind  
☐ Other renewable resource (describe on page 19)
- ☐ Geothermal  
☐ Fossil fuel (specify)  
☐ Coal (not waste)  
☐ Fuel oil/diesel  
☐ Natural gas (not waste)  
☐ Other fossil fuel (describe on page 19)  
☐ Other (describe on page 19)

**6b** If you specified "waste" as the primary energy input in line 6a, indicate the type of waste fuel used: (check one)

- ☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)
- ☐ Anthracite culm produced prior to July 23, 1985
  - ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
  - ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
  - ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
  - ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
  - ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
  - ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
  - ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
  - ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
  - ☐ Heat from exothermic reactions (describe on page 19)
  - ☐ Residual heat (describe on page 19)
  - ☐ Used rubber tires
  - ☐ Plastic materials
  - ☐ Refinery off-gas
  - ☐ Petroleum coke
- ☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

**6c** Provide the average energy input, calculated on a calendar year basis, in terms of Btu/h for the following fossil fuel energy inputs, and provide the related percentage of the total average annual energy input to the facility (18 C.F.R. § 292.202(j)). For any oil or natural gas fuel, use lower heating value (18 C.F.R. § 292.202(m)).

Fuel	Annual average energy input for specified fuel	Percentage of total annual energy input
Natural gas	0 Btu/h	0 %
Oil-based fuels	0 Btu/h	0 %
Coal	0 Btu/h	0 %

## Technical Facility Information

Indicate the maximum gross and maximum net electric power production capacity of the facility at the point(s) of delivery by completing the worksheet below. Respond to all items. If any of the parasitic loads and/or losses identified in lines 7b through 7e are negligible, enter zero for those lines.

<b>7a</b> The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	5,000 kW
<b>7b</b> Parasitic station power used at the facility to run equipment which is necessary and integral to the power production process (boiler feed pumps, fans/blowers, office or maintenance buildings directly related to the operation of the power generating facility, etc.). If this facility includes non-power production processes (for instance, power consumed by a cogeneration facility's thermal host), do not include any power consumed by the non-power production activities in your reported parasitic station power.	0 kW
<b>7c</b> Electrical losses in interconnection transformers	12.5 kW
<b>7d</b> Electrical losses in AC/DC conversion equipment, if any	0 kW
<b>7e</b> Other interconnection losses in power lines or facilities (other than transformers and AC/DC conversion equipment) between the terminals of the generator(s) and the point of interconnection with the utility	12.5 kW
<b>7f</b> Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	25.0 kW
<b>7g</b> Maximum net power production capacity = 7a - 7f	4,975.0 kW

**7h** Description of facility and primary components: Describe the facility and its operation. Identify all boilers, heat recovery steam generators, prime movers (any mechanical equipment driving an electric generator), electrical generators, photovoltaic solar equipment, fuel cell equipment and/or other primary power generation equipment used in the facility. Descriptions of components should include (as applicable) specifications of the nominal capacities for mechanical output, electrical output, or steam generation of the identified equipment. For each piece of equipment identified, clearly indicate how many pieces of that type of equipment are included in the plant, and which components are normally operating or normally in standby mode. Provide a description of how the components operate as a system. Applicants for cogeneration facilities do not need to describe operations of systems that are clearly depicted on and easily understandable from a cogeneration facility's attached mass and heat balance diagram; however, such applicants should provide any necessary description needed to understand the sequential operation of the facility depicted in their mass and heat balance diagram. If additional space is needed, continue in the Miscellaneous section starting on page 19.

The system is a photovoltaic ground-mounted solar facility comprised of approximately 22,000 305Wp solar modules, mounted on racks, utilizing no more than 4 central inverters to convert DC power produced to AC power for safe and reliable delivery into the electric grid.



## Information Required for Small Power Production Facility

If you indicated in line 1k that you are seeking qualifying small power production facility status for your facility, then you must respond to the items on this page. Otherwise, skip page 10.

<b>Certification of Compliance with Size Limitations</b>	<p>Pursuant to 18 C.F.R. § 292.204(a), the power production capacity of any small power production facility, together with the power production capacity of any other small power production facilities that use the same energy resource, are owned by the same person(s) or its affiliates, and are located at the same site, may not exceed 80 megawatts. To demonstrate compliance with this size limitation, or to demonstrate that your facility is exempt from this size limitation under the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (Pub. L. 101-575, 104 Stat. 2834 (1990) <i>as amended by</i> Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).</p>																
	<p><b>8a</b> Identify any facilities with electrical generating equipment located within 1 mile of the electrical generating equipment of the instant facility, and for which any of the entities identified in lines 5a or 5b, or their affiliates, holds at least a 5 percent equity interest.</p>																
	<p>Check here if no such facilities exist. <input checked="" type="checkbox"/></p>																
	<table border="1"> <thead> <tr> <th>Facility location (city or county, state)</th> <th>Root docket # (if any)</th> <th>Common owner(s)</th> <th>Maximum net power production capacity</th> </tr> </thead> <tbody> <tr> <td>1) _____</td> <td>QF - _____</td> <td>_____</td> <td>_____ kW</td> </tr> <tr> <td>2) _____</td> <td>QF - _____</td> <td>_____</td> <td>_____ kW</td> </tr> <tr> <td>3) _____</td> <td>QF - _____</td> <td>_____</td> <td>_____ kW</td> </tr> </tbody> </table>	Facility location (city or county, state)	Root docket # (if any)	Common owner(s)	Maximum net power production capacity	1) _____	QF - _____	_____	_____ kW	2) _____	QF - _____	_____	_____ kW	3) _____	QF - _____	_____	_____ kW
	Facility location (city or county, state)	Root docket # (if any)	Common owner(s)	Maximum net power production capacity													
	1) _____	QF - _____	_____	_____ kW													
2) _____	QF - _____	_____	_____ kW														
3) _____	QF - _____	_____	_____ kW														
<p><input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed</p>																	
<p><b>8b</b> The Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (Incentives Act) provides exemption from the size limitations in 18 C.F.R. § 292.204(a) for certain facilities that were certified prior to 1995. Are you seeking exemption from the size limitations in 18 C.F.R. § 292.204(a) by virtue of the Incentives Act?</p> <p><input type="checkbox"/> Yes (continue at line 8c below) <input checked="" type="checkbox"/> No (skip lines 8c through 8e)</p>																	
<p><b>8c</b> Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes <input type="checkbox"/> No <input type="checkbox"/></p>																	
<p><b>8d</b> Did construction of the facility commence on or before December 31, 1999? Yes <input type="checkbox"/> No <input type="checkbox"/></p>																	
<p><b>8e</b> If you answered No in line 8d, indicate whether reasonable diligence was exercised toward the completion of the facility, taking into account all factors relevant to construction? Yes <input type="checkbox"/> No <input type="checkbox"/> If you answered Yes, provide a brief narrative explanation in the Miscellaneous section starting on page 19 of the construction timeline (in particular, describe why construction started so long after the facility was certified) and the diligence exercised toward completion of the facility.</p>																	
<b>Certification of Compliance with Fuel Use Requirements</b>	<p>Pursuant to 18 C.F.R. § 292.204(b), qualifying small power production facilities may use fossil fuels, in minimal amounts, for only the following purposes: ignition; start-up; testing; flame stabilization; control use; alleviation or prevention of unanticipated equipment outages; and alleviation or prevention of emergencies, directly affecting the public health, safety, or welfare, which would result from electric power outages. The amount of fossil fuels used for these purposes may not exceed 25 percent of the total energy input of the facility during the 12-month period beginning with the date the facility first produces electric energy or any calendar year thereafter.</p>																
	<p><b>9a</b> Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:</p> <p><input checked="" type="checkbox"/> Applicant certifies that the facility will use fossil fuels <i>exclusively</i> for the purposes listed above.</p>																
	<p><b>9b</b> Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:</p> <p><input checked="" type="checkbox"/> Applicant certifies that the amount of fossil fuel used at the facility will not, in aggregate, exceed 25 percent of the total energy input of the facility during the 12-month period beginning with the date the facility first produces electric energy or any calendar year thereafter.</p>																



## Information Required for Cogeneration Facility

If you indicated in line 1k that you are seeking qualifying cogeneration facility status for your facility, then you must respond to the items on pages 11 through 13. Otherwise, skip pages 11 through 13.

General Cogeneration Information	<p>Pursuant to 18 C.F.R. § 292.202(c), a cogeneration facility produces electric energy and forms of useful thermal energy (such as heat or steam) used for industrial, commercial, heating, or cooling purposes, through the sequential use of energy. Pursuant to 18 C.F.R. § 292.202(s), "sequential use" of energy means the following: (1) for a topping-cycle cogeneration facility, the use of reject heat from a power production process in sufficient amounts in a thermal application or process to conform to the requirements of the operating standard contained in 18 C.F.R. § 292.205(a); or (2) for a bottoming-cycle cogeneration facility, the use of at least some reject heat from a thermal application or process for power production.</p>	
	<p><b>10a</b> What type(s) of cogeneration technology does the facility represent? (check all that apply)</p> <p> <input type="checkbox"/> Topping-cycle cogeneration           <input type="checkbox"/> Bottoming-cycle cogeneration         </p>	
	<p><b>10b</b> To help demonstrate the sequential operation of the cogeneration process, and to support compliance with other requirements such as the operating and efficiency standards, include with your filing a mass and heat balance diagram depicting average annual operating conditions. This diagram must include certain items and meet certain requirements, as described below. You must check next to the description of each requirement below to certify that you have complied with these requirements.</p>	
	<p>Check to certify compliance with indicated requirement</p>	<p>Requirement</p>
	<input type="checkbox"/>	Diagram must show orientation within system piping and/or ducts of all prime movers, heat recovery steam generators, boilers, electric generators, and condensers (as applicable), as well as any other primary equipment relevant to the cogeneration process.
	<input type="checkbox"/>	Any average annual values required to be reported in lines 10b, 12a, 13a, 13b, 13d, 13f, 14a, 15b, 15d and/or 15f must be computed over the anticipated hours of operation.
	<input type="checkbox"/>	Diagram must specify all fuel inputs by fuel type and average annual rate in Btu/h. Fuel for supplementary firing should be specified separately and clearly labeled. All specifications of fuel inputs should use lower heating values.
	<input type="checkbox"/>	Diagram must specify average gross electric output in kW or MW for each generator.
	<input type="checkbox"/>	Diagram must specify average mechanical output (that is, any mechanical energy taken off of the shaft of the prime movers for purposes not directly related to electric power generation) in horsepower, if any. Typically, a cogeneration facility has no mechanical output.
	<input type="checkbox"/>	At each point for which working fluid flow conditions are required to be specified (see below), such flow condition data must include mass flow rate (in lb/h or kg/s), temperature (in °F, R, °C or K), absolute pressure (in psia or kPa) and enthalpy (in Btu/lb or kJ/kg). Exception: For systems where the working fluid is <i>liquid only</i> (no vapor at any point in the cycle) and where the type of liquid and specific heat of that liquid are clearly indicated on the diagram or in the Miscellaneous section starting on page 19, only mass flow rate and temperature (not pressure and enthalpy) need be specified. For reference, specific heat at standard conditions for pure liquid water is approximately 1.002 Btu/(lb*°R) or 4.195 kJ/(kg*K).
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.	
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.	
<input type="checkbox"/>	Diagram must specify working fluid flow conditions at make-up water inputs.	

EPC Act 2005 Requirements for Fundamental Use  
 of Energy Output from Cogeneration Facilities

EPC Act 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPC Act 2005) established a new section 210(n) of the Public Utility Regulatory Policies Act of 1978 (PURPA), 16 USC 824a-3(n), with additional requirements for any qualifying cogeneration facility that (1) is seeking to sell electric energy pursuant to section 210 of PURPA and (2) was either not a cogeneration facility on August 8, 2005, or had not filed a self-certification or application for Commission certification of QF status on or before February 1, 2006. These requirements were implemented by the Commission in 18 C.F.R. § 292.205(d). Complete the lines below, carefully following the instructions, to demonstrate whether these additional requirements apply to your cogeneration facility and, if so, whether your facility complies with such requirements.

**11a** Was your facility operating as a qualifying cogeneration facility on or before August 8, 2005? Yes ☐ No ☐

**11b** Was the initial filing seeking certification of your facility (whether a notice of self-certification or an application for Commission certification) filed on or before February 1, 2006? Yes ☐ No ☐

If the answer to either line 11a or 11b is Yes, then continue at line 11c below. Otherwise, if the answers to both lines 11a and 11b are No, skip to line 11e below.

**11c** With respect to the design and operation of the facility, have any changes been implemented on or after February 2, 2006 that affect general plant operation, affect use of thermal output, and/or increase net power production capacity from the plant's capacity on February 1, 2006?

☐ Yes (continue at line 11d below)

No. Your facility is not subject to the requirements of 18 C.F.R. § 292.205(d) at this time. However, it may be ☐ subject to these requirements in the future if changes are made to the facility. At such time, the applicant would need to recertify the facility to determine eligibility. Skip lines 11d through 11j.

**11d** Does the applicant contend that the changes identified in line 11c are not so significant as to make the facility a "new" cogeneration facility that would be subject to the 18 C.F.R. § 292.205(d) cogeneration requirements?

Yes. Provide in the Miscellaneous section starting on page 19 a description of any relevant changes made to ☐ the facility (including the purpose of the changes) and a discussion of why the facility should not be considered a "new" cogeneration facility in light of these changes. Skip lines 11e through 11j.

No. Applicant stipulates to the fact that it is a "new" cogeneration facility (for purposes of determining the ☐ applicability of the requirements of 18 C.F.R. § 292.205(d)) by virtue of modifications to the facility that were initiated on or after February 2, 2006. Continue below at line 11e.

**11e** Will electric energy from the facility be sold pursuant to section 210 of PURPA?

☐ Yes. The facility is an EPC Act 2005 cogeneration facility. You must demonstrate compliance with 18 C.F.R. § 292.205(d)(2) by continuing at line 11f below.

No. Applicant certifies that energy will *not* be sold pursuant to section 210 of PURPA. Applicant also certifies ☐ its understanding that it must recertify its facility in order to determine compliance with the requirements of 18 C.F.R. § 292.205(d) *before* selling energy pursuant to section 210 of PURPA in the future. Skip lines 11f through 11j.

**11f** Is the net power production capacity of your cogeneration facility, as indicated in line 7g above, less than or equal to 5,000 kW?

Yes, the net power production capacity is less than or equal to 5,000 kW. 18 C.F.R. § 292.205(d)(4) provides a ☐ rebuttable presumption that cogeneration facilities of 5,000 kW and smaller capacity comply with the requirements for fundamental use of the facility's energy output in 18 C.F.R. § 292.205(d)(2). Applicant certifies its understanding that, should the power production capacity of the facility increase above 5,000 kW, then the facility must be recertified to (among other things) demonstrate compliance with 18 C.F.R. § 292.205(d)(2). Skip lines 11g through 11j.

No, the net power production capacity is greater than 5,000 kW. Demonstrate compliance with the ☐ requirements for fundamental use of the facility's energy output in 18 C.F.R. § 292.205(d)(2) by continuing on the next page at line 11g.

EPA 2005 Requirements for Fundamental Use of Energy Output from Cogeneration Facilities (continued)

Lines 11g through 11k below guide the applicant through the process of demonstrating compliance with the requirements for "fundamental use" of the facility's energy output. 18 C.F.R. § 292.205(d)(2). Only respond to the lines on this page if the instructions on the previous page direct you to do so. Otherwise, skip this page.

18 C.F.R. § 292.205(d)(2) requires that the electrical, thermal, chemical and mechanical output of an EPA 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a qualifying facility to its host facility. If you were directed on the previous page to respond to the items on this page, then your facility is an EPA 2005 cogeneration facility that is subject to this "fundamental use" requirement.

The Commission's regulations provide a two-pronged approach to demonstrating compliance with the requirements for fundamental use of the facility's energy output. First, the Commission has established in 18 C.F.R. § 292.205(d)(3) a "fundamental use test" that can be used to demonstrate compliance with 18 C.F.R. § 292.205(d)(2). Under the fundamental use test, a facility is considered to comply with 18 C.F.R. § 292.205(d)(2) if at least 50 percent of the facility's total annual energy output (including electrical, thermal, chemical and mechanical energy output) is used for industrial, commercial, residential or institutional purposes.

Second, an applicant for a facility that does not pass the fundamental use test may provide a narrative explanation of and support for its contention that the facility nonetheless meets the requirement that the electrical, thermal, chemical and mechanical output of an EPA 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a qualifying facility to its host facility.

Complete lines 11g through 11j below to determine compliance with the fundamental use test in 18 C.F.R. § 292.205(d)(3). Complete lines 11g through 11j *even if you do not intend to rely upon the fundamental use test to demonstrate compliance with 18 C.F.R. § 292.205(d)(2)*.

<b>11g</b> Amount of electrical, thermal, chemical and mechanical energy output (net of internal generation plant losses and parasitic loads) expected to be used annually for industrial, commercial, residential or institutional purposes and not sold to an electric utility	MWh
<b>11h</b> Total amount of electrical, thermal, chemical and mechanical energy expected to be sold to an electric utility	MWh
<b>11i</b> Percentage of total annual energy output expected to be used for industrial, commercial, residential or institutional purposes and not sold to a utility = $100 * 11g / (11g + 11h)$	0 %

**11j** Is the response in line 11i greater than or equal to 50 percent?

Yes. Your facility complies with 18 C.F.R. § 292.205(d)(2) by virtue of passing the fundamental use test provided in 18 C.F.R. § 292.205(d)(3). Applicant certifies its understanding that, if it is to rely upon passing

- ☐ the fundamental use test as a basis for complying with 18 C.F.R. § 292.205(d)(2), then the facility must comply with the fundamental use test both in the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years.

No. Your facility does not pass the fundamental use test. Instead, you must provide in the Miscellaneous section starting on page 19 a narrative explanation of and support for why your facility meets the requirement that the electrical, thermal, chemical and mechanical output of an EPA 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a QF to its host facility. Applicants providing a narrative explanation of why their facility should be found to

☐ comply with 18 C.F.R. § 292.205(d)(2) in spite of non-compliance with the fundamental use test may want to review paragraphs 47 through 61 of Order No. 671 (accessible from the Commission's QF website at [www.ferc.gov/QF](http://www.ferc.gov/QF)), which provide discussion of the facts and circumstances that may support their explanation. Applicant should also note that the percentage reported above will establish the standard that that facility must comply with, both for the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years. See Order No. 671 at paragraph 51. As such, the applicant should make sure that it reports appropriate values on lines 11g and 11h above to serve as the relevant annual standard, taking into account expected variations in production conditions.

## Information Required for Topping-Cycle Cogeneration Facility

If you indicated in line 10a that your facility represents topping-cycle cogeneration technology, then you must respond to the items on pages 14 and 15. Otherwise, skip pages 14 and 15.

Usefulness of Topping-Cycle Thermal Output	The thermal energy output of a topping-cycle cogeneration facility is the net energy made available to an industrial or commercial process or used in a heating or cooling application. Pursuant to sections 292.202(c), (d) and (h) of the Commission's regulations (18 C.F.R. §§ 292.202(c), (d) and (h)), the thermal energy output of a qualifying topping-cycle cogeneration facility must be useful. In connection with this requirement, describe the thermal output of the topping-cycle cogeneration facility by responding to lines 12a and 12b below.		
	<b>12a</b> Identify and describe each thermal host, and specify the annual average rate of thermal output made available to each host for each use. For hosts with multiple uses of thermal output, provide the data for each use in separate rows.		
	Name of entity (thermal host) taking thermal output	Thermal host's relationship to facility; Thermal host's use of thermal output	Average annual rate of thermal output attributable to use (net of heat contained in process return or make-up water)
	1)	Select thermal host's relationship to facility	Btu/h
		Select thermal host's use of thermal output	
	2)	Select thermal host's relationship to facility	Btu/h
		Select thermal host's use of thermal output	
	3)	Select thermal host's relationship to facility	Btu/h
		Select thermal host's use of thermal output	
	4)	Select thermal host's relationship to facility	Btu/h
	Select thermal host's use of thermal output		
5)	Select thermal host's relationship to facility	Btu/h	
	Select thermal host's use of thermal output		
6)	Select thermal host's relationship to facility	Btu/h	
	Select thermal host's use of thermal output		
<input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed			
<b>12b</b> Demonstration of usefulness of thermal output: At a minimum, provide a brief description of each use of the thermal output identified above. In some cases, this brief description is sufficient to demonstrate usefulness. However, if your facility's use of thermal output is not common, and/or if the usefulness of such thermal output is not reasonably clear, then you must provide additional details as necessary to demonstrate usefulness. Your application may be rejected and/or additional information may be required if an insufficient showing of usefulness is made. (Exception: If you have previously received a Commission certification approving a specific use of thermal output related to the instant facility, then you need only provide a brief description of that use and a reference by date and docket number to the order certifying your facility with the indicated use. Such exemption may not be used if any change creates a material deviation from the previously authorized use.) If additional space is needed, continue in the Miscellaneous section starting on page 19.			



Topping-Cycle Operating and  
Efficiency Value Calculation

Applicants for facilities representing topping-cycle technology must demonstrate compliance with the topping-cycle operating standard and, if applicable, efficiency standard. Section 292.205(a)(1) of the Commission's regulations (18 C.F.R. § 292.205(a)(1)) establishes the operating standard for topping-cycle cogeneration facilities: the useful thermal energy output must be no less than 5 percent of the total energy output. Section 292.205(a)(2) (18 C.F.R. § 292.205(a)(2)) establishes the efficiency standard for topping-cycle cogeneration facilities for which installation commenced on or after March 13, 1980: the useful power output of the facility plus one-half the useful thermal energy output must (A) be no less than 42.5 percent of the total energy input of natural gas and oil to the facility; and (B) if the useful thermal energy output is less than 15 percent of the total energy output of the facility, be no less than 45 percent of the total energy input of natural gas and oil to the facility. To demonstrate compliance with the topping-cycle operating and/or efficiency standards, or to demonstrate that your facility is exempt from the efficiency standard based on the date that installation commenced, respond to lines 13a through 13l below.

If you indicated in line 10a that your facility represents *both* topping-cycle and bottoming-cycle cogeneration technology, then respond to lines 13a through 13l below considering only the energy inputs and outputs attributable to the topping-cycle portion of your facility. Your mass and heat balance diagram must make clear which mass and energy flow values and system components are for which portion (topping or bottoming) of the cogeneration system.

<b>13a</b> Indicate the annual average rate of useful thermal energy output made available to the host(s), net of any heat contained in condensate return or make-up water	Btu/h
<b>13b</b> Indicate the annual average rate of net electrical energy output	kW
<b>13c</b> Multiply line 13b by 3,412 to convert from kW to Btu/h	0 Btu/h
<b>13d</b> Indicate the annual average rate of mechanical energy output taken directly off of the shaft of a prime mover for purposes not directly related to power production (this value is usually zero)	hp
<b>13e</b> Multiply line 13d by 2,544 to convert from hp to Btu/h	0 Btu/h
<b>13f</b> Indicate the annual average rate of energy input from natural gas and oil	Btu/h
<b>13g</b> Topping-cycle operating value = $100 * 13a / (13a + 13c + 13e)$	0 %
<b>13h</b> Topping-cycle efficiency value = $100 * (0.5 * 13a + 13c + 13e) / 13f$	0 %
<b>13i</b> Compliance with operating standard: Is the operating value shown in line 13g greater than or equal to 5%? <input type="checkbox"/> Yes (complies with operating standard) <input type="checkbox"/> No (does not comply with operating standard)	
<b>13j</b> Did installation of the facility in its current form commence on or after March 13, 1980? <input type="checkbox"/> Yes. Your facility is subject to the efficiency requirements of 18 C.F.R. § 292.205(a)(2). Demonstrate compliance with the efficiency requirement by responding to line 13k or 13l, as applicable, below. <input type="checkbox"/> No. Your facility is exempt from the efficiency standard. Skip lines 13k and 13l.	
<b>13k</b> Compliance with efficiency standard (for low operating value): If the operating value shown in line 13g is less than 15%, then indicate below whether the efficiency value shown in line 13h greater than or equal to 45%: <input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)	
<b>13l</b> Compliance with efficiency standard (for high operating value): If the operating value shown in line 13g is greater than or equal to 15%, then indicate below whether the efficiency value shown in line 13h is greater than or equal to 42.5%: <input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)	

## Information Required for Bottoming-Cycle Cogeneration Facility

If you indicated in line 10a that your facility represents bottoming-cycle cogeneration technology, then you must respond to the items on pages 16 and 17. Otherwise, skip pages 16 and 17.

Usefulness of Bottoming-Cycle Thermal Output	<p>The thermal energy output of a bottoming-cycle cogeneration facility is the energy related to the process(es) from which at least some of the reject heat is then used for power production. Pursuant to sections 292.202(c) and (e) of the Commission's regulations (18 C.F.R. § 292.202(c) and (e)), the thermal energy output of a qualifying bottoming-cycle cogeneration facility must be useful. In connection with this requirement, describe the process(es) from which at least some of the reject heat is used for power production by responding to lines 14a and 14b below.</p>		
	<p><b>14a</b> Identify and describe each thermal host and each bottoming-cycle cogeneration process engaged in by each host. For hosts with multiple bottoming-cycle cogeneration processes, provide the data for each process in separate rows.</p>		
	<p>Name of entity (thermal host) performing the process from which at least some of the reject heat is used for power production</p>	<p>Thermal host's relationship to facility; Thermal host's process type</p>	<p>Has the energy input to the thermal host been augmented for purposes of increasing power production capacity? (if Yes, describe on p. 19)</p>
	1)	<p>Select thermal host's relationship to facility</p> <p>Select thermal host's process type</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
	2)	<p>Select thermal host's relationship to facility</p> <p>Select thermal host's process type</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
	3)	<p>Select thermal host's relationship to facility</p> <p>Select thermal host's process type</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>
	<p><input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed</p>		
	<p><b>14b</b> Demonstration of usefulness of thermal output: At a minimum, provide a brief description of each process identified above. In some cases, this brief description is sufficient to demonstrate usefulness. However, if your facility's process is not common, and/or if the usefulness of such thermal output is not reasonably clear, then you must provide additional details as necessary to demonstrate usefulness. Your application may be rejected and/or additional information may be required if an insufficient showing of usefulness is made. (Exception: If you have previously received a Commission certification approving a specific bottoming-cycle process related to the instant facility, then you need only provide a brief description of that process and a reference by date and docket number to the order certifying your facility with the indicated process. Such exemption may not be used if any material changes to the process have been made.) If additional space is needed, continue in the Miscellaneous section starting on page 19.</p>		
	<p></p>		
	<p></p>		

Bottoming-Cycle Operating and  
Efficiency Value Calculation

Applicants for facilities representing bottoming-cycle technology and for which installation commenced on or after March 13, 1990 must demonstrate compliance with the bottoming-cycle efficiency standards. Section 292.205(b) of the Commission's regulations (18 C.F.R. § 292.205(b)) establishes the efficiency standard for bottoming-cycle cogeneration facilities: the useful power output of the facility must be no less than 45 percent of the energy input of natural gas and oil for supplementary firing. To demonstrate compliance with the bottoming-cycle efficiency standard (if applicable), or to demonstrate that your facility is exempt from this standard based on the date that installation of the facility began, respond to lines 15a through 15h below.

If you indicated in line 10a that your facility represents *both* topping-cycle and bottoming-cycle cogeneration technology, then respond to lines 15a through 15h below considering only the energy inputs and outputs attributable to the bottoming-cycle portion of your facility. Your mass and heat balance diagram must make clear which mass and energy flow values and system components are for which portion of the cogeneration system (topping or bottoming).

**15a** Did installation of the facility in its current form commence on or after March 13, 1980?

- ☐ Yes. Your facility is subject to the efficiency requirement of 18 C.F.R. § 292.205(b). Demonstrate compliance with the efficiency requirement by responding to lines 15b through 15h below.
- ☐ No. Your facility is exempt from the efficiency standard. Skip the rest of page 17.

**15b** Indicate the annual average rate of net electrical energy output

kW

**15c** Multiply line 15b by 3,412 to convert from kW to Btu/h

0 Btu/h

**15d** Indicate the annual average rate of mechanical energy output taken directly off of the shaft of a prime mover for purposes not directly related to power production (this value is usually zero)

hp

**15e** Multiply line 15d by 2,544 to convert from hp to Btu/h

0 Btu/h

**15f** Indicate the annual average rate of supplementary energy input from natural gas or oil

Btu/h

**15g** Bottoming-cycle efficiency value =  $100 * (15c + 15e) / 15f$

0 %

**15h** Compliance with efficiency standard: Indicate below whether the efficiency value shown in line 15g is greater than or equal to 45%:

☐ Yes (complies with efficiency standard)

☐ No (does not comply with efficiency standard)



## Certificate of Completeness, Accuracy and Authority

Applicant must certify compliance with and understanding of filing requirements by checking next to each item below and signing at the bottom of this section. Forms with incomplete Certificates of Completeness, Accuracy and Authority will be rejected by the Secretary of the Commission.

Signer identified below certifies the following: (check all items and applicable subitems)

- ☒ He or she has read the filing, including any information contained in any attached documents, such as cogeneration mass and heat balance diagrams, and any information contained in the Miscellaneous section starting on page 19, and knows its contents.
- ☒ He or she has provided all of the required information for certification, and the provided information is true as stated, to the best of his or her knowledge and belief.
- ☒ He or she possess full power and authority to sign the filing; as required by Rule 2005(a)(3) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2005(a)(3)), he or she is one of the following: (check one)
- ☐ The person on whose behalf the filing is made
  - ☒ An officer of the corporation, trust, association, or other organized group on behalf of which the filing is made
  - ☐ An officer, agent, or employee of the governmental authority, agency, or instrumentality on behalf of which the filing is made
  - ☐ A representative qualified to practice before the Commission under Rule 2101 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2101) and who possesses authority to sign
- ☒ He or she has reviewed all automatic calculations and agrees with their results, unless otherwise noted in the Miscellaneous section starting on page 19.
- ☒ He or she has provided a copy of this Form 556 and all attachments to the utilities with which the facility will interconnect and transact (see lines 4a through 4d), as well as to the regulatory authorities of the states in which the facility and those utilities reside. See the Required Notice to Public Utilities and State Regulatory Authorities section on page 3 for more information.

Provide your signature, address and signature date below. Rule 2005(c) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2005(c)) provides that persons filing their documents electronically may use typed characters representing his or her name to sign the filed documents. A person filing this document electronically should sign (by typing his or her name) in the space provided below.

Your Signature

Heath McLaughlin

Your address

176 Mine Lake Court, Suite 100  
Raleigh, NC 27601

Date

1/9/2015

Audit Notes

Commission Staff Use Only:



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## Miscellaneous

Use this space to provide any information for which there was not sufficient space in the previous sections of the form to provide. For each such item of information *clearly identify the line number that the information belongs to*. You may also use this space to provide any additional information you believe is relevant to the certification of your facility.

Your response below is not limited to one page. Additional page(s) will automatically be inserted into this form if the length of your response exceeds the space on this page. Use as many pages as you require.

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