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November 17, 2016

VIA ELECTRONIC FILING

Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

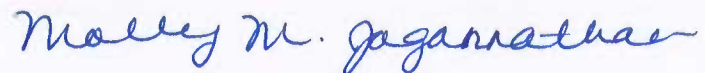
**Re: Application of Pecan Solar, LLC for a Certificate of Public Convenience and
Necessity to Construct a 74.9-MW Solar Facility in Northampton County,
North Carolina
Docket No. SP-5273, Sub 0**

Dear Chief Clerk:

Enclosed for filing in the above-referenced matter are the Direct Testimony and Exhibits of Doug Copeland on behalf of Pecan Solar, LLC.

Thank you for your attention to this matter. If you have any questions, please let me know.

Sincerely,



Molly McIntosh Jagannathan

Attachments

cc: Parties of Record

CERTIFICATE OF SERVICE

I certify that Pecan Solar, LLC's Direct Testimony and Exhibits of Doug Copeland have been served by electronic mail (e-mail), hand-delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to the parties of record.

This the 17th day of November 2016.



Molly McIntosh Jagannathan

TROUTMAN SANDERS LLP

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North Carolina State Bar No. 36931

ATTORNEYS FOR PECAN SOLAR, LLC

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. SP-5273, SUB 0

In the Matter of)	
Application of Pecan Solar, LLC for)	DIRECT TESTIMONY OF
a Certificate of Public Convenience)	DOUG COPELAND
and Necessity to Construct a 74.9-MW)	FOR
Solar Facility in Northampton County,)	PECAN SOLAR, LLC
North Carolina)	

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Howard Douglas Copeland, and my business address is 40 West Evergreen
3 Avenue, Suite 104, Philadelphia, Pennsylvania.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am Regional Project Development Manager for EDF Renewable Energy, Inc. (“EDF
6 RE”), the parent company of Pecan Solar, LLC (“Pecan Solar”). EDF Renewable
7 Development, Inc., an EDF RE affiliate, acquired Pecan Solar from Geenex Solar, LLC
8 (“Geenex”) in March 2016.

9 **Q. PLEASE DISCUSS YOUR PROFESSIONAL QUALIFICATIONS.**

10 A. I have worked in the renewable energy industry for over ten years, including nine years
11 on projects in PJM. My experience includes market analysis, site identification and
12 selection, land leasing, environmental and construction permitting, project marketing,
13 project acquisition evaluation, and all aspects of local stakeholder outreach. I have
14 worked on renewable energy projects in fifteen different states and have experience in
15 wind, solar, energy storage, and offshore wind development. Prior to working in
16 renewable energy, I ran a nationally recognized economic development program in St.
17 Paul, Minnesota, working with small business owners, local government bodies, and
18 outside investors. I have a master’s degree from Boston College and a bachelor’s degree
19 from Villanova University.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

21 A. My testimony supports Pecan Solar’s application to amend the Certificate of Public
22 Convenience and Necessity (“CPCN”) previously issued by the North Carolina Utilities

Commission (the “Commission”) on June 17, 2015 and amended on August 24, 2015, for the solar photovoltaic (“PV”) generating facility that is the subject of this proceeding.

Q. PLEASE DESCRIBE THE FACILITY WHICH IS THE SUBJECT OF THIS PROCEEDING.

A. On August 24, 2015, the Commission issued an Order Issuing Amended Certificate and Accepting Registration of New Renewable Energy Facility in this docket, approving the amended application filed by Pecan Solar for a CPCN to construct a 74.9 megawatt (“MW”) solar PV electric generating facility to be located east and west of Bethel Church Road approximately 0.6 to 2 miles north of the intersection of Bethel Church Road and Highway 186 in an unincorporated area approximately two miles east of the town of Seaboard, Northampton County, North Carolina (the “Facility”). The proposed Facility is described in detail in the applications to amend the CPCN filed in this docket on July 27, 2016 and September 23, 2016, which are attached hereto as Exhibit 1 and Exhibit 2, respectively. Among other things, the amendments seek to add additional parcels of land to be used in the construction of the Facility. Pecan Solar is leasing the additional real property from the current owners and currently owns 100% of the project. As proposed in the amendments, the Facility will consist of approximately 270,480 330w to 370w PV modules affixed to a single axis-tracking system. The system will utilize thirty 2.5 MW inverters. The Facility will be surrounded by chain link fencing. It is anticipated that the Facility will be commissioned in March 2018.

Q. PLEASE EXPLAIN WHY THE AMENDMENT TO THE CPCN IS NECESSARY.

A. In EDF RE’s analysis of the project site, we found that to design the project to most efficiently produce electricity, additional land was needed to maximize the output, while

1 keeping the overall project nameplate size the same. In addition, EDF RE does not seek
2 to impact any wetlands found on site. We determined that while some of the potential
3 land in the original CPCN could be used, it was better to not use certain portions of that
4 land to avoid any water impacts. The addition of new land sought in the amendments
5 allows us to meet that goal. It is important to note that while the additional parcels would
6 help us to optimize the layout of the project and to avoid wetlands, we would not be
7 building out all the project areas covered in the proposed amended CPCN.

8 **Q. TO WHOM WILL PECAN SOLAR SELL THE POWER GENERATED BY THE**
9 **FACILITY?**

10 A. In its Order Issuing Certificate entered on June 17, 2015, the Commission granted Pecan
11 Solar a waiver of the requirements of Commission Rule R8-64(b)(6)(i)(c), which would
12 have required Pecan Solar to submit a statement from the electric utility to which Pecan
13 Solar plans to sell the electricity to be generated. As a condition of the waiver, the
14 Commission directed Pecan Solar to make a supplemental filing providing this
15 information upon determining the entity or entities to which the output of the Facility will
16 be sold. Pecan Solar is currently engaged in confidential negotiations with potential
17 buyers of the output of the Facility and will update the Commission in accordance with
18 the Order once it has identified a buyer.

19 **Q. PLEASE EXPLAIN THE STEPS THAT PECAN SOLAR PLANS TO TAKE TO**
20 **MINIMIZE THE DISTURBANCE TO NEIGHBORS DURING THE**
21 **CONSTRUCTION OF THE FACILITY.**

22 A. EDF RE has developed almost 8 Gigawatts of renewable energy generation projects
23 across North America, which include over 1100 MW of projects being built this year.

1 We will follow all local permits and rules regarding construction schedules and vehicle
2 movement. In particular, we will observe all requirements of our Road Use Agreement,
3 Conditional Use Permit, and District Regulations, including, without limitation,
4 minimizing the impact of traffic on local roads, using site screening measures, limiting
5 work to daylight hours where possible, and implementing a notification process to
6 adjacent landowners. Appropriate dust control and water runoff measures will also be
7 used, and very little grading or heavy earth movement is anticipated.

8 **Q. PLEASE EXPLAIN THE STEPS THAT PECAN SOLAR PLANS TO TAKE TO**
9 **MAINTAIN THE FACILITY OVER THE COURSE OF ITS OPERATING LIFE.**

10 A. EDF RE's roots in the United States began thirty years ago as an operations and
11 maintenance company. We are currently the largest provider of third-party operations
12 and maintenance services in North America, maintaining wind, solar, biomass, biogas,
13 and energy storage projects across the continent. EDF RE builds every project as if we
14 will own it for the entire operating life. We have trained field staff who monitor and
15 maintain the project, along with 24/7 monitoring from our Operations Center. We will
16 also hire locally to assist with the operations and maintenance of the Facility.

17 **Q. HOW WILL THE COMMUNITY BENEFIT FROM THIS FACILITY?**

18 A. The community will benefit in a number of ways. First, the project will provide over
19 190,000 MW-hours of clean energy every year. As the project will be located in
20 Dominion North Carolina Power's service territory, the addition of this renewable energy
21 to Dominion North Carolina Power's system has the potential to cause Dominion North
22 Carolina Power to defer the addition of fossil fuel-fired generation to its generating fleet.
23 Second, some of the energy generated by the Facility will be consumed locally. Finally,

1 the Facility will involve significant economic development benefits in Northampton
2 County. It is anticipated that this Facility will create 20-50 local construction jobs for
3 approximately six months and will utilize local businesses during construction. In
4 addition, the project will provide additional tax base to local governments resulting in
5 approximately \$300,000 of additional personal property tax revenue annually.

6 **Q. ARE THERE ANY ADDITIONAL BENEFITS THAT WILL RESULT FROM**
7 **THE CONSTRUCTION AND OPERATION OF THE FACILITY?**

8 A. In 2007, with the enactment of Session Law 2007-397 ("Senate Bill 3"), North Carolina
9 became the first state in the southeastern United States to adopt a renewable energy and
10 energy efficiency portfolio standard ("REPS"). As required by Senate Bill 3, by 2021,
11 investor-owned utilities are required to meet up to 12.5% of energy needs for retail sales
12 through renewable energy resources or energy efficiency measures.

13 Compliance with these REPS requirements is demonstrated through the purchase
14 of renewable energy certificates ("RECs"). The Facility will provide a significant source
15 of RECs for use by electric power suppliers to comply with their REPS obligations. It is
16 anticipated that the Facility will provide over 190,000 RECs annually. In addition to
17 facilitating the compliance of the electric power suppliers in North Carolina with their
18 REPS obligations, the Facility will promote the various objectives of Senate Bill 3,
19 including: (1) diversifying the resources used to meet the energy needs of North Carolina
20 consumers; (2) providing greater energy security through the use of indigenous resources;
21 and (3) encouraging private investment in renewable energy. Further, the electric utilities
22 in North Carolina have acknowledged the generation benefits of distributed base load
23 power to stabilize the grid.

1 The Facility has also self-certified as a qualifying facility for the purposes of the
2 Public Utility Regulatory Policies Act of 1978, which requires utilities to purchase the
3 electrical output from qualifying facilities, thereby helping to fulfill the federal policy
4 objective of promoting greater use of renewable energy as well.

5 **Q. HOW WAS THE SITE SELECTED AS THE LOCATION OF THE FACILITY?**

6 A. EDF RE acquired the site from Geenex earlier this year after looking at a number of
7 project sites and investment opportunities in the region. Geenex chose the site based on
8 proximity to power lines, interest from landowners, open land, and fairly flat topography.
9 These are the same criteria we would use, and the additional land we seek to add to the
10 CPCN by virtue of the proposed amendments was chosen based on the same principles.

11 **Q. HAVE YOU READ THE COMMENTS FILED BY VERLENE STEPHENSON IN**
12 **THIS PROCEEDING?**

13 A. Yes. EDF RE and Pecan Solar are open to hearing the concerns of neighbors and
14 working cooperatively to ensure that any impact to neighbors caused by the construction
15 of the Facility is minimized and that the Facility makes a positive contribution to the
16 community. We seek to be open and transparent with the surrounding community in
17 connection with our development plans. As required by applicable laws and regulations,
18 Pecan Solar notified the public of its plans to construct the Facility as well as the
19 proposed amendments to the CPCN. It is my understanding that Geenex has also reached
20 out to Ms. Stephenson in an attempt to address her concerns.

21 **Q. WHAT IS YOUR RESPONSE TO THE CONCERNS NOTED BY MS.**
22 **STEPHENSON REGARDING LAND USE COMPATIBILITY?**

1 Northampton County considers solar to be an approved and compatible use on farmland.
2 Pecan Solar will work with the local jurisdiction to secure any and all land use approvals
3 and permits necessary to construct the Facility on the parcels outlined in the amendments
4 to the applications. The Facility will be constructed in strict accordance with all
5 applicable laws and regulations, including any local and county zoning ordinances.

6 **Q. HOW DO YOU RESPOND TO MS. STEPHENSON'S CONCERN THAT**
7 **FARMLAND WILL BE LOST AS A RESULT OF THE FACILITY?**

8 A. All of the land that EDF RE is using for the project will be leased and returned to the land
9 owners at the end of the project. Pecan Solar will use best practices in construction and
10 maintenance of the Facility to ensure that the productive capabilities of the land for any
11 future agricultural activity will be maintained. The overall grading of the land will not be
12 changed. At the end of the project lifespan, all material from the solar project is removed
13 from site, and the land is able to be farmed. The panels themselves are fully self-
14 contained in glass and do not leak fluid or metals into the soil.

15 **Q. MS. STEPHENSON ASKS WHAT KIND OF WEED CONTROL MEASURES**
16 **WILL BE USED AT THE FACILITY. HOW DO YOU RESPOND?**

17 A. We do not perform any weed control beyond mowing. For our solar projects, we
18 typically plant groundcover grass or clover recommended by local landscaping
19 companies and mow the site three times per year. No other forms of weed control are
20 planned for this project.

21 **Q. DO YOU BELIEVE THE PROJECT WILL HAVE ANY ADVERSE IMPACTS**
22 **ON PUBLIC HEALTH OR THE ENVIRONMENT?**

1 A. No. The Facility will be required to meet environmental standards and obtain applicable
2 permits from North Carolina Department of Environmental and Natural Resources,
3 including a Stormwater Management Permit and an Erosion and Sedimentation Control
4 Plan. In addition, Pecan Solar will work with the local government to secure any and all
5 necessary local approvals for the project. To the best of my knowledge, solar facilities
6 such as the one proposed here do not create a potential for adverse impacts to public
7 health.

8 **Q. HOW DO YOU RESPOND TO MS. STEPHENSON'S COMMENT ABOUT THE**
9 **AESTHETIC IMPACT OF THE FACILITY?**

10 A. The Northampton County zoning requirements include solar as an approved use on this
11 type of land. As part of the right to build solar, they require the solar project to be set one
12 hundred feet back from all roads and non-participating landowners. They also require an
13 evergreen screen around all exterior portions of the project, unless an existing tree buffer
14 exists. Of course, Pecan Solar will comply with these zoning requirements, and these
15 measures will help shield the project from the sightline, including the view from Bethel
16 Church Road.

17 **Q. WHAT IS YOUR RECOMMENDATION WITH RESPECT TO THE**
18 **APPLICATION TO AMEND THE CPCN?**

19 A. It is my recommendation that the Commission issue an order amending the CPCN for the
20 Facility.

21 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

22 A. Yes.

EXHIBIT 1
to
Direct Testimony of Doug
Copeland

BY ELECTRONIC SUBMISSION

July 27, 2016

Gail L. Mount
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, North Carolina 27603

Re: Docket No. SP-5273, Sub 0
Pecan Solar, LLC – Amended Application for a Certificate of Public
Convenience and Application to Register a New Renewable Energy Facility.

Dear Clerk Mount:

On June 17 and August 24, 2015 the North Carolina Utilities Commission issued an order granting a certificate and an amended certificate of public convenience and necessity for Pecan Solar, LLC respectively. Pecan Solar LLC is now requesting a second amended certificate of public convenience and necessity to include additional land parcels and changes of ownership, equipment selection, operation date and E911 address. An updated FERC for 556, Conditional Use Permit and Application for a New Renewable Energy Facility are also being submitted. Pecan Solar expects to receive an Amended Order requiring Publication of Notice.

In support of its amended application, Pecan Solar is providing information to the Commission that has changed from the previous filings:

1. Exhibit (1)(i)

Pecan Solar, LLC
c/o EDF Renewable Energy
1925 Isaac Newton Square, Suite 280
Reston, VA 20190
Attn: Doug Copeland
Tel. (703) 905-8110
Email: Doug.Copeland@edf-re.com

2. Exhibit (1)(ii)

Doug Copeland is an individual duly authorized to act as a corporate agent for the purpose of this application. Correspondence, documents, and filings pursuant to this application

should be sent as follows:

Pecan Solar, LLC
c/o EDF Renewable Energy
1925 Isaac Newton Square, Suite 280
Reston, VA 20190
Attn: Doug Copeland
Tel. (703) 905-8110
Email: Doug.Copeland@edf-re.com

3. Exhibit (1)(iii)

The leases signed by the following have been converted to purchase options:

1. Three acres from Mason Rodwell Howell III were purchased. The remaining 177 acres are still under lease.
2. Michael H. Wray and Philip L. Moncure
3. Michael H. Wray, Kay W. Wray, David M. Dunlow and Debra B. Dunlow


Additional leases have been signed with the following landowners:

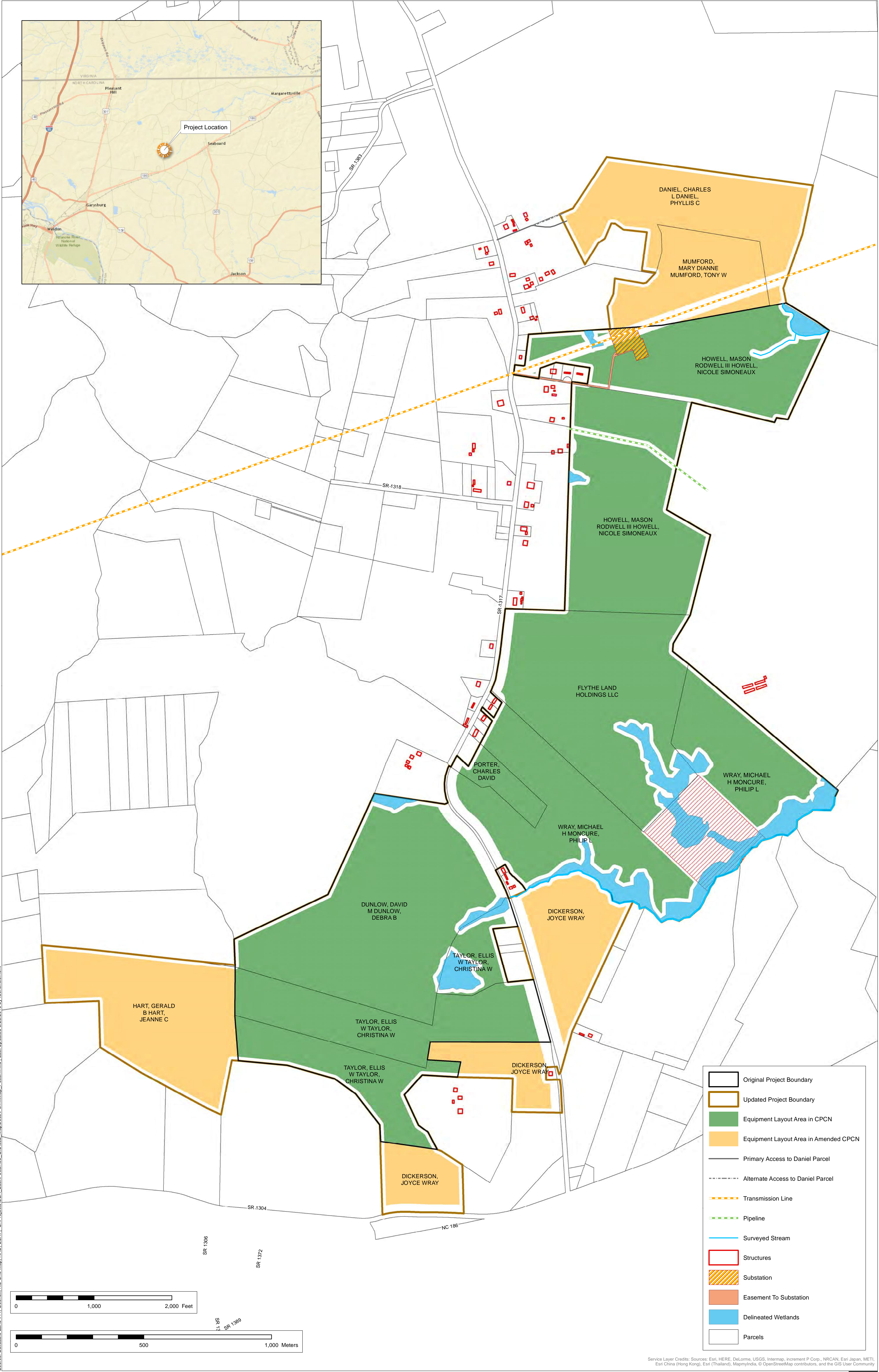
1. Charles Daniel
2. Tony Munford
3. Joyce Dickerson
4. Gerald Hart

4. Exhibit (2)(i) Attachment 1 to Exhibit 2 is amended to show the existing and new landowners along with the location of the major equipment.
5. Exhibit (2)(ii) The E911 address is 289 Bethel Church Road, Pleasant Hill, Seaboard, NC in Northampton County. Latitude 36.489°, Longitude -77.482°
6. Exhibit (3)(ii) The facility will consist of approximately two hundred, seventy thousand, four hundred and eighty (270,480) 330w to 370w photovoltaic (pv) modules affixed to single axis-tracking system and ground-mounted rack. The system will utilize thirty (30) 2.5 MW inverter. The Facility includes thirty (30) 645 v to 34.5 kv medium voltage transformers and one 34.5 kv to 115 kv step-up transformer and associated equipment.
7. Exhibit (3)(iv) The first phase of the Facility is project to come on line by March 30, 2018.
8. Exhibit (3)(ix) the projected year one annual sales of the facility is approximately 178,790,517 kWh/yr.
9. Exhibit (3) The applicant plans to produce renewable energy certificates that are eligible for compliance with North Carolina's renewable energy and energy efficiency portfolio standard.
10. Exhibit (4)(i) A portion of the site is a permitted use. A variance for the permitted use rules were requested and approved.

11. Exhibit (4)(ii) A copy of the Conditional Use Permit for a portion of the facility is attached, along with a copy of a revised FERC Form 556.

Sincerely,


Doug Copeland
Pecan Solar LLC



NORTHAMPTON COUNTY ZONING DEPARTMENT

ZONING PERMIT # 201500751

PO Box 995
Jackson, NC 27845
(252) 534-1905

Application: 7384

Applicant:

Application Date: 07/14/2015

Owner: TAYLOR, ELLIS W

Issue Date: 07/22/2015

Mailing Address: 214 ROLLINGWOOD RD
ROANOKE RAPIDS, NC 27870

Parcel # 0801078

911 Address: 289 BETHEL CHURCH RD

Physical Location of Property:

Zoning District: AR

Description of Work: SOLAR FARM--Parcel #s 08-00080, 08-01094, 08-02420, 08-02768, 08-02280, 08-00823, 08-02009, 08-01078, 08-02770

Existing Use :

Proposed Use:

Permit Expiration Date: 07/21/2018

Building Hgt:

Setbacks:

FRONT 40'

RIGHT 30'

LEFT 30'

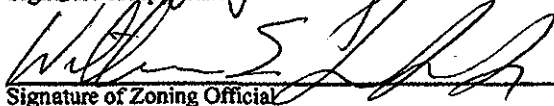
REAR 50'

*** SETBACKS HAVE BEEN APPROVED BASED ON SITE PLAN PROVIDED

This permit does not give the permit holder the right to occupy or use the structure, or land, for which the permit has been approved for. Occupancy or use shall only be permitted after a Certificate of Compliance has been issued by the Northampton County Zoning Office. The issuance of a Certificate of Compliance does not negate the requirement of a Certificate of Occupancy from the Northampton County Building Inspections Office when applicable.


Signature of Applicant

10/30/2015
Date


Signature of Zoning Official

10/30/2015
Date

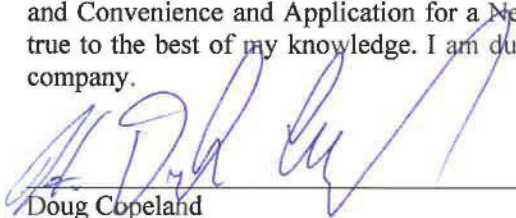
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Nov 28 2016

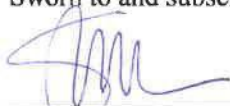
BEFORE THE NORTH CAROLINA
UTILITIES COMMISSION

In the Matter of the Application of)	
Pecan Solar, LLC for an amended)	
Certificate of Convenience and Public)	VERIFICATION
Necessity and Application as a New)	
Renewable Energy Facility)	

I, Doug Copeland, Registered Agent of Pecan Solar, LLC, a North Carolina limited liability company, verify that the contents of the amended Application for a Certificate of Public Necessity and Convenience and Application for a New Renewable Energy Facility filed in this docket are true to the best of my knowledge. I am duly authorized to act on behalf of said limited liability company.


Doug Copeland

Sworn to and subscribed before me, this the 27th day of July, 2016.



Notary Public (signature)

(Typed/ Printed Name)

My Commission Expires:

4-2-17

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
SUZANNE J. MORRISON, Notary Public
Whitpain Twp., Montgomery County
My Commission Expires April 2, 2017

Application to Register a Renewable Energy Facility or New Renewable Energy Facility Pursuant to Rule R8-66

Please complete the form, print it, have it signed, and notarized, and make 9 copies and send them to the Chief Clerk of the Commission.

You may also file this application electronically; please see www.ncuc.net/electronic_filing.html for instructions. Be sure to attach additional information, such as maps, as required.

Applicants should consult Rule R8-66 while completing this form in order to ensure they provide sufficient information.

1	Facility name:	Pecan Solar
2	Full and correct name of the owner of the facility:	Pecan Solar LLC
3	Business address:	1925 Isaac Newton Square, Suite 280 Reston, VA 20190
4	Electronic mailing address:	doug.copeland@edf-re.com
5	Telephone number:	703-905-8110
6	Owner's agent for purposes of this application, if applicable:	Same as above
7	Agent's business address:	
8	Agent's electronic mailing address:	
9	Agent's telephone number:	
10	The owner is:	Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation/LLC <input checked="" type="checkbox"/>
11	If a corporation, state and date of incorporation:	State <u>NC</u> Date <u>10/17/13</u>
12	If a corporation that is incorporated outside of North Carolina, is it domesticated in North Carolina?	<input type="checkbox"/> YES <input type="checkbox"/> NO
13	If a partnership, the name and business address of each general partner. (Add additional sheets if necessary.)	

14	Nature of the renewable energy facility:	Solar photovoltaic
15	Describe the facility, including its technology, and the source of its power and fuel(s). Thermal facilities should describe how its host uses the facility's thermal energy output. (Add additional sheets if necessary.)	The facility will consist of approximately two hundred, seventy thousand, four hundred and eighty 330w to 370w photovoltaic (pv) modules affixed to single axis-tracking system and ground-mounted rack. The system will utilize thirty 2.5 MW inverter, thirty (30) medium voltage transformers and one step-up transformer and associated equipment.
16	Whether it produces electricity, useful thermal energy, or both:	electricity
17	Nameplate capacity in kW/MW (AC) and/or maximum Btu per hour for thermal facilities:	74,900 kw (AC)
18	The facility's projected dependable capacity in kW AC and/or Btu/hour:	74,000 kw (AC)
19	The E911 address of the facility:	289 Bethel Church Road, Pleasant Hill, Seaboard, NC
20	The county where the facility will be located:	Northampton
21	GPS coordinates for the center of the facility's site:	Latitude 36.489°, Longitude -77.482°
22	The location of the facility set forth in terms of local highways, streets, rivers, streams, or other generally known local landmarks. Attach a map, such as a county road map, with the location indicated on the map.	The facility is located approximately 2 miles west of Seaboard, NC off of Bethel Church Road. See attached arial map.
22	The site owner:	Daniel, Mumford, Howell, Flythe Land Holdings, Porter, Dunlow, Taylor, Wray & Moncure, Dickerson, Hart
23	What is the facility owner's legal interest in the site?	Purchase and lease options
List the federal and state approvals that are required to build and/or operate this facility, and attach copies of those that have been obtained. Wind facilities with multiple turbines, where each turbine is licensed separately, may provide copies of approvals for one such turbine but shall add an attestation that approvals for all of the turbines are		

available for inspection.		
24	Federal permits and licenses:	None Required.
25	State permits and licenses:	North Carolina Dept of Environmental and Natural Resources (NCDENR) - Approval of erosion and sedimentation control plans and Stormwater Management.
26	Exemptions required for construction and operation of the facility:	None Required.
27	Statement of whether each permit or exemption has been obtained or applied for (attach a copy of those that have been obtained with this application):	
28	If the facility has been placed into service, on what date did the facility begin operating?	
29	If the facility is not yet operating, on what date is the facility projected to be placed into service?	03/30/2018
30	If the facility is already operating, what is the amount of energy produced by the facility, net of station use, for the most recent 12-month or calendar-year period? Energy production data for a shorter time period is acceptable for facilities that have not yet operated for a full year.	
31	What entity does (or will) read the facility's energy production meter(s) for the purpose of issuing renewable energy certificates?	PJM Interconnection, L.L. C. will read the facility's energy production meter for the purpose of issuing renewable energy certificates.

32	For thermal energy facilities, describe the method to be used to determine the facility's thermal energy production, in Btus per hour, that will be eligible for REC issuance. (Add sheets if necessary.)	NA
33	Does the facility participate in a REC tracking system and if so, which one? If not, which tracking system will the facility participate in for the purpose of REC issuance?	NC RETS
34	If this facility has already been the subject of a proceeding or submittal before the Commission, such as a Report of Proposed Construction or a Certificate of Public Convenience and Necessity, please provide the Commission Docket Number, if available.	SP-5273, Sub 0
If the facility is a combined heat and power system, the owner shall also include in its registration statement the following information:		
35	A narrative description and one-line diagram of the electrical and thermal generation systems to include Btu meters, boilers, steam pressures, valves, turbines, and ultimate uses of the steam. Also, include any crossover of steam, cross connections (even if by spool piece), or the ability to supply steam from other means or to other loads.	NA
36	A description of the parasitic electrical and parasitic thermal loads. (Add sheets if necessary.)	NA
37	Calculations for the energy used by the parasitic electrical and parasitic thermal loads, with supporting documents. (Add sheets as necessary.)	NA

38	A description of the method of collecting the waste heat from the electrical generating system. (Add sheets as necessary.)	NA
39	A description of the host(s) of the waste heat and an explanation of how the waste heat will be used and useful.	NA
40	Calculations of the percent of energy that is delivered to the system host(s) but not used and useful.	NA
41	Confirmation if the proposed operation have any pressure-reducing valves operating simultaneously in parallel with any back-pressure turbines?	NA
If the facility owner intends to earn multiple types of RECs by using a variety of fuels, the owner should include in its registration statement the following additional information:		
42	Example calculations for the energy production associated with each fuel used by the facility as required by Appendix C (Multi-fuel Generation) to the Operating Procedures for the North Carolina Renewable Energy Tracking System. These calculations must ultimately show the electrical and thermal energy (if any) attributable to only the renewable fuels and how the number of renewable energy certificates would be determined.	NA
43	Describe each fuel to be used by the facility:	NA
44	Describe how the heat content of each fuel is or will be determined for the purpose of issuing renewable energy certificates:	NA

The owner of the renewable energy facility shall provide the following attestations, signed and notarized:

1. ☒ Yes ☐ No I certify that the facility is in substantial compliance with all federal and state laws, regulations, and rules for the protection of the environment and conservation of natural resources.

2. ☒ Yes ☐ No I certify that the facility satisfies the requirements of G.S. 62-133.8(a)(5) or (7) as a:
☐ renewable energy facility, or
☒ new renewable energy facility,
 and that the facility will be operated as a:
☐ renewable energy facility, or
☒ new renewable energy facility.

3. ☒ Yes ☐ No I certify that 1) my organization is not simultaneously under contract with NC GreenPower to sell RECs emanating from the same electricity production being tracked in NC-RETS; and 2) any renewable energy certificates (whether or not bundled with electric power) sold to an electric power supplier to comply with G.S. 62-133.8 have not, and will not, be remarketed or otherwise resold for any other purpose, including another renewable energy portfolio standard or voluntary purchase of renewable energy certificates in North Carolina (such as NC GreenPower) or any other state or country, and that the electric power associated with the certificates will not be offered or sold with any representation that the power is bundled with renewable energy certificates.

4. ☒ Yes ☐ No I certify that I consent to the auditing of my organization's books and records by the Public Staff insofar as those records relate to transactions with North Carolina electric power suppliers, and agree to provide the Public Staff and the Commission access to our books and records, wherever they are located, and to the facility.

5. ☒ Yes ☐ No I certify that the information provided is true and correct for all years that the facility has earned RECs for compliance with G.S. 62-133.8.

6. ☒ Yes ☐ No I certify that I am the owner of the renewable energy facility or am duly authorized to act on behalf of the owner for the purpose of this filing.


 (Signature)

Doug Copeland

(Name – Printed or Typed)

 Manager (Title)

7-27-16

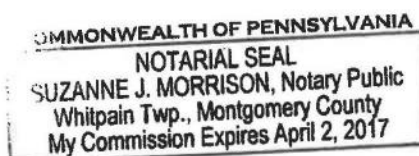
(Date)

VERIFICATIONSTATE OF Pennsylvania COUNTY OF PhiladelphiaDoug Copeland, personally appeared before me this day and, being first duly sworn, says that the facts stated in the foregoing application and any exhibits, documents, and statements thereto attached are true as he or she believes.WITNESS my hand and notarial seal, this 27th day of July, 2016.My Commission Expires: 4-2-17

Signature of Notary Public

Suzanne J. Morrison

Name of Notary Public – Typed or Printed



The name of the person who completes and signs the application must be typed or printed by the notary in the space provided in the verification. The notary's name must be typed or printed below the notary's seal. This original verification must be affixed to the original application, and a copy of this verification must be affixed to each of the 15 copies that are also submitted to the Commission.

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC

OMB Control # 1902-0075
Expiration 06/30/2019

Form 556

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

General

Questions about completing this form should be sent to Form556@ferc.gov. Information about the Commission's QF program, answers to frequently asked questions about QF requirements or completing this form, and contact information for QF program staff are available at the Commission's QF website, www.ferc.gov/QF. The Commission's QF website also provides links to the Commission's QF regulations (18 C.F.R. § 131.80 and Part 292), as well as other statutes and orders pertaining to the Commission's QF program.

Who Must File

Any applicant seeking QF status or recertification of QF status for a generating facility with a net power production capacity (as determined in lines 7a through 7g below) greater than 1000 kW must file a self-certification or an application for Commission certification of QF status, which includes a properly completed Form 556. Any applicant seeking QF status for a generating facility with a net power production capacity 1000 kW or less is exempt from the certification requirement, and is therefore not required to complete or file a Form 556. See 18 C.F.R. § 292.203.

How to Complete the Form 556

This form is intended to be completed by responding to the items in the order they are presented, according to the instructions given. If you need to back-track, you may need to clear certain responses before you will be allowed to change other responses made previously in the form. If you experience problems, click on the nearest help button (?) for assistance, or contact Commission staff at Form556@ferc.gov.

Certain lines in this form will be automatically calculated based on responses to previous lines, with the relevant formulas shown. You must respond to all of the previous lines within a section before the results of an automatically calculated field will be displayed. If you disagree with the results of any automatic calculation on this form, contact Commission staff at Form556@ferc.gov to discuss the discrepancy before filing.

You must complete all lines in this form unless instructed otherwise. Do not alter this form or save this form in a different format. Incomplete or altered forms, or forms saved in formats other than PDF, will be rejected.

How to File a Completed Form 556

Applicants are required to file their Form 556 electronically through the Commission's eFiling website (see instructions on page 2). By filing electronically, you will reduce your filing burden, save paper resources, save postage or courier charges, help keep Commission expenses to a minimum, and receive a much faster confirmation (via an email containing the docket number assigned to your facility) that the Commission has received your filing.

If you are simultaneously filing both a waiver request and a Form 556 as part of an application for Commission certification, see the "Waiver Requests" section on page 3 for more information on how to file.

Paperwork Reduction Act Notice

This form is approved by the Office of Management and Budget. Compliance with the information requirements established by the FERC Form No. 556 is required to obtain or maintain status as a QF. See 18 C.F.R. § 131.80 and Part 292. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The estimated burden for completing the FERC Form No. 556, including gathering and reporting information, is as follows: 3 hours for self-certification of a small power production facility, 8 hours for self-certifications of a cogeneration facility, 6 hours for an application for Commission certification of a small power production facility, and 50 hours for an application for Commission certification of a cogeneration facility. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the following: Information Clearance Officer, Office of the Executive Director (ED-32), Federal Energy Regulatory Commission, 888 First Street N.E., Washington, DC 20426 (DataClearance@ferc.gov); and Desk Officer for FERC, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503 (oir_submission@omb.eop.gov). Include the Control No. 1902-0075 in any correspondence.

Electronic Filing (eFiling)

To electronically file your Form 556, visit the Commission's QF website at www.ferc.gov/QF and click the eFiling link.

If you are eFiling your first document, you will need to register with your name, email address, mailing address, and phone number. If you are registering on behalf of an employer, then you will also need to provide the employer name, alternate contact name, alternate contact phone number and alternate contact email.

Once you are registered, log in to eFiling with your registered email address and the password that you created at registration. Follow the instructions. When prompted, select one of the following QF-related filing types, as appropriate, from the Electric or General filing category.

Filing category	Filing Type as listed in eFiling	Description
Electric	(Fee) Application for Commission Cert. as Cogeneration QF	Use to submit an application for Commission certification or Commission recertification of a cogeneration facility as a QF.
	(Fee) Application for Commission Cert. as Small Power QF	Use to submit an application for Commission certification or Commission recertification of a small power production facility as a QF.
	Self-Certification Notice (QF, EG, FC)	Use to submit a notice of self-certification of your facility (cogeneration or small power production) as a QF.
	Self-Recertification of Qualifying Facility (QF)	Use to submit a notice of self-recertification of your facility (cogeneration or small power production) as a QF.
	Supplemental Information or Request	Use to correct or supplement a Form 556 that was submitted with errors or omissions, or for which Commission staff has requested additional information. Do <i>not</i> use this filing type to report new changes to a facility or its ownership; rather, use a self-recertification or Commission recertification to report such changes.
General	(Fee) Petition for Declaratory Order (not under FPA Part 1)	Use to submit a petition for declaratory order granting a waiver of Commission QF regulations pursuant to 18 C.F.R. §§ 292.204(a) (3) and/or 292.205(c). A Form 556 is not required for a petition for declaratory order unless Commission recertification is being requested as part of the petition.

You will be prompted to submit your filing fee, if applicable, during the electronic submission process. Filing fees can be paid via electronic bank account debit or credit card.

During the eFiling process, you will be prompted to select your file(s) for upload from your computer.

Filing Fee

No filing fee is required if you are submitting a self-certification or self-recertification of your facility as a QF pursuant to 18 C.F.R. § 292.207(a).

A filing fee is required if you are filing either of the following:

- (1) an application for Commission certification or recertification of your facility as a QF pursuant to 18 C.F.R. § 292.207(b), or
- (2) a petition for declaratory order granting waiver pursuant to 18 C.F.R. §§ 292.204(a)(3) and/or 292.205(c).

The current fees for applications for Commission certifications and petitions for declaratory order can be found by visiting the Commission's QF website at www.ferc.gov/QF and clicking the Fee Schedule link.

You will be prompted to submit your filing fee, if applicable, during the electronic filing process described on page 2.

Required Notice to Utilities and State Regulatory Authorities

Pursuant to 18 C.F.R. § 292.207(a)(ii), you must provide a copy of your self-certification or request for Commission certification to the utilities with which the facility will interconnect and/or transact, as well as to the State regulatory authorities of the states in which your facility and those utilities reside. Links to information about the regulatory authorities in various states can be found by visiting the Commission's QF website at www.ferc.gov/QF and clicking the Notice Requirements link.

What to Expect From the Commission After You File

An applicant filing a Form 556 electronically will receive an email message acknowledging receipt of the filing and showing the docket number assigned to the filing. Such email is typically sent within one business day, but may be delayed pending confirmation by the Secretary of the Commission of the contents of the filing.

An applicant submitting a self-certification of QF status should expect to receive no documents from the Commission, other than the electronic acknowledgement of receipt described above. Consistent with its name, a self-certification is a certification *by the applicant itself* that the facility meets the relevant requirements for QF status, and does not involve a determination by the Commission as to the status of the facility. An acknowledgement of receipt of a self-certification, in particular, does not represent a determination by the Commission with regard to the QF status of the facility. An applicant self-certifying may, however, receive a rejection, revocation or deficiency letter if its application is found, during periodic compliance reviews, not to comply with the relevant requirements.

An applicant submitting a request for Commission certification will receive an order either granting or denying certification of QF status, or a letter requesting additional information or rejecting the application. Pursuant to 18 C.F.R. § 292.207(b)(3), the Commission must act on an application for Commission certification within 90 days of the later of the filing date of the application or the filing date of a supplement, amendment or other change to the application.

Waiver Requests

18 C.F.R. § 292.204(a)(3) allows an applicant to request a waiver to modify the method of calculation pursuant to 18 C.F.R. § 292.204(a)(2) to determine if two facilities are considered to be located at the same site, for good cause. 18 C.F.R. § 292.205(c) allows an applicant to request waiver of the requirements of 18 C.F.R. §§ 292.205(a) and (b) for operating and efficiency upon a showing that the facility will produce significant energy savings. A request for waiver of these requirements must be submitted as a petition for declaratory order, with the appropriate filing fee for a petition for declaratory order. Applicants requesting Commission recertification as part of a request for waiver of one of these requirements should electronically submit their completed Form 556 along with their petition for declaratory order, rather than filing their Form 556 as a separate request for Commission recertification. Only the filing fee for the petition for declaratory order must be paid to cover both the waiver request and the request for recertification *if such requests are made simultaneously*.

18 C.F.R. § 292.203(d)(2) allows an applicant to request a waiver of the Form 556 filing requirements, for good cause. Applicants filing a petition for declaratory order requesting a waiver under 18 C.F.R. § 292.203(d)(2) do not need to complete or submit a Form 556 with their petition.

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC

OMB Control # 1902-0075
Expiration 06/30/2019

Form 556

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

OFFICIAL COPY

Nov 28 2016

Application Information

1a Full name of applicant (legal entity on whose behalf qualifying facility status is sought for this facility)

Pecan Solar LLC

1b Applicant street address

1925 Isaac Newton Square, Suite 280

1c City

Reston

1d State/province

VA

1e Postal code

20190

1f Country (if not United States)

1g Telephone number

(703) 905-8110

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 15 - 668 - 000

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 _____ and to begin operation on _____

☒ Change(s) to a previously certified facility to be effective on 7/20/16
(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)

Contact Information	2a Name of contact person Doug Copeland		2b Telephone number (703) 905-8110	
	2c Which of the following describes the contact person's relationship to the applicant? (check one) <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			
	2d Company or organization name (if applicant is an individual, check here and skip to line 2e) <input type="checkbox"/> EDF Renewable Energy			
	2e Street address (if same as Applicant, check here and skip to line 3a) <input checked="" type="checkbox"/>			
	2f City		2g State/province	
	2h Postal code		2i Country (if not United States)	
Facility Identification and Location	3a Facility name Pecan Solar			
	3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) <input type="checkbox"/> 289 Bethel Church Road, Pleasant Hill, Seaboard, NC			
	3c Geographic coordinates: 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 (+) 77.482 degrees Latitude <input checked="" type="checkbox"/> North (+) 36.489 degrees <input checked="" type="checkbox"/> West (-)			
	3d City (if unincorporated, check here and enter nearest city) <input checked="" type="checkbox"/> Seaboard		3e State/province NC	
	3f County (or check here for independent city) <input type="checkbox"/> Northampton		3g Country (if not United States)	
	4a Identify utility interconnecting with the facility Dominion North Carolina Power			
Transacting Utilities	4b Identify utilities providing wheeling service or check here if none <input checked="" type="checkbox"/>			
	4c Identify utilities purchasing the useful electric power output or check here if none <input type="checkbox"/> TBD			
	4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none <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) EDF Renewable Energy, Inc.	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) EDF Energies Nouvelles S. A.	100%
2) Electricite de France S. A.	100%
3) French government	84.5%
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

EDF Renewable Energy

Energy Input

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

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	75,000 kW
7b 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
7c Electrical losses in interconnection transformers	500 kW
7d Electrical losses in AC/DC conversion equipment, if any	0 kW
7e 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	500 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	1,000.0 kW
7g Maximum net power production capacity = 7a - 7f	74,000.0 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 facility is a single-axis tracking, ground mounted solar system consisting of approximately two hundred, seventy thousand, four hundred and eighty (270,480) 330w to 370w photovoltaic (pv) modules, thirty (30) 2.5 MW inverters, thirty 645 v to 34.5 kv transformer and one 34.5 to 115 kv step-up transformer and associated equipment.

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.

Certification of Compliance with Size Limitations	<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>8a 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>8b 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>8c 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>8d Did construction of the facility commence on or before December 31, 1999? Yes <input type="checkbox"/> No <input type="checkbox"/></p>																	
<p>8e 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>																	
Certification of Compliance with Fuel Use Requirements	<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>9a 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>9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:</p> <p>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> <p><input checked="" type="checkbox"/></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	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.	
	10a What type(s) of cogeneration technology does the facility represent? (check all that apply)	
	<input type="checkbox"/> Topping-cycle cogeneration	<input type="checkbox"/> Bottoming-cycle cogeneration
	10b 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.	
	Check to certify compliance with indicated requirement	Requirement
	<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.	

EPAAct 2005 Requirements for Fundamental Use of Energy Output from Cogeneration Facilities

EPAAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAAct 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 EPAAct 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.

EPAct 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 EPAct 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 EPAct 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 EPAct 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)*.

11g 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
11h Total amount of electrical, thermal, chemical and mechanical energy expected to be sold to an electric utility	MWh
11i 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 EPAct 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), 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.

12a 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	

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

12b 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.

13a 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
13b Indicate the annual average rate of net electrical energy output	kW
13c Multiply line 13b by 3,412 to convert from kW to Btu/h	0 Btu/h
13d 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
13e Multiply line 13d by 2,544 to convert from hp to Btu/h	0 Btu/h
13f Indicate the annual average rate of energy input from natural gas and oil	Btu/h
13g Topping-cycle operating value = $100 * 13a / (13a + 13c + 13e)$	0 %
13h Topping-cycle efficiency value = $100 * (0.5 * 13a + 13c + 13e) / 13f$	0 %
13i 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)	
13j 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.	
13k 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)	
13l 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>14a 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 <i>in separate rows</i>.</p>		
	Name of entity (thermal host) performing the process from which at least some of the reject heat is used for power production	Thermal host's relationship to facility; Thermal host's process type	Has the energy input to the thermal host been augmented for purposes of increasing power production capacity? (if Yes, describe on p. 19)
	1)	Select thermal host's relationship to facility Select thermal host's process type	Yes <input type="checkbox"/> No <input type="checkbox"/>
	2)	Select thermal host's relationship to facility Select thermal host's process type	Yes <input type="checkbox"/> No <input type="checkbox"/>
	3)	Select thermal host's relationship to facility Select thermal host's process type	Yes <input type="checkbox"/> No <input type="checkbox"/>
	<input type="checkbox"/> Check here and continue in the Miscellaneous section starting on page 19 if additional space is needed		
	<p>14b 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>		



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

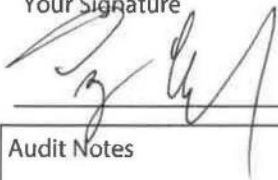
Applicant must certify compliance with and understanding of filing requirements by checking next to each item below and signing at the bottom of this section. Forms with incomplete Certificates of Completeness, Accuracy and Authority will be rejected by the Secretary of the Commission.

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



Your address

1925 Isaac Newton Square, Suite
280, Reston, VA 20190

Date

7-27-16

Audit Notes

Commission Staff Use Only:



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.

July, 2016

1b-1e Updated for new applicant information

2a-2d Updated for new contract information

4c Updated to indicate Dominion North Carolina Power is not purchasing the output

5a Updated to reflect a change in direct ownership

5b Updated to add upstream owners

5c Update to reflect updated facility operator

7a-7h updated to reflect changes in the design of the Facility

EXHIBIT 2
to
Direct Testimony of Doug
Copeland

BY ELECTRONIC SUBMISSION

September 20, 2016

Gail L. Mount
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Raleigh, North Carolina 27603

Re: Docket No. SP-5273, Sub 0
Pecan Solar, LLC – Amended Application for a Certificate of Public
Convenience and Application to Register a New Renewable Energy Facility.

Dear Clerk Mount:

On June 17 and August 24, 2015 the North Carolina Utilities Commission issued an order granting a certificate and an amended certificate of public convenience and necessity for Pecan Solar, LLC respectively. On July 27, Pecan Solar LLC requested a second amended certificate of public convenience and necessity. Pecan Solar is now requesting a third amended certificate of public convenience and necessity to include additional land parcels. We understand that the North Carolina Utilities Commission will be issuing an amended order to publish.

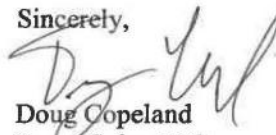
In support of its amended application, Pecan Solar is providing information to the Commission that has changed from the previous filings:

1. Exhibit (1)(iii)

The following additional leases have been signed:

1. James E. Kerr, II
 2. J E Kerr Timber Company
2. Exhibit (2)(i) Attachment 1 to Exhibit 2 is amended to show the existing and new landowners along with the location of the major equipment.

Sincerely,

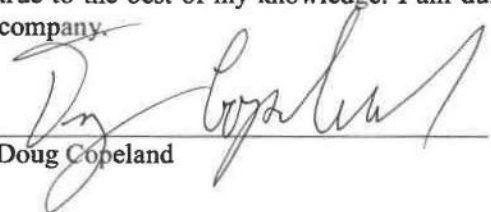


Doug Copeland
Pecan Solar LLC

BEFORE THE NORTH CAROLINA
UTILITIES COMMISSION

In the Matter of the Application of)	
Pecan Solar, LLC for an amended)	
Certificate of Convenience and Public)	VERIFICATION
Necessity and Application as a New)	
Renewable Energy Facility)	

I, Doug Copeland, Registered Agent of Pecan Solar, LLC, a North Carolina limited liability company, verify that the contents of the amended Application for a Certificate of Public Necessity and Convenience and Application for a New Renewable Energy Facility filed in this docket are true to the best of my knowledge. I am duly authorized to act on behalf of said limited liability company.



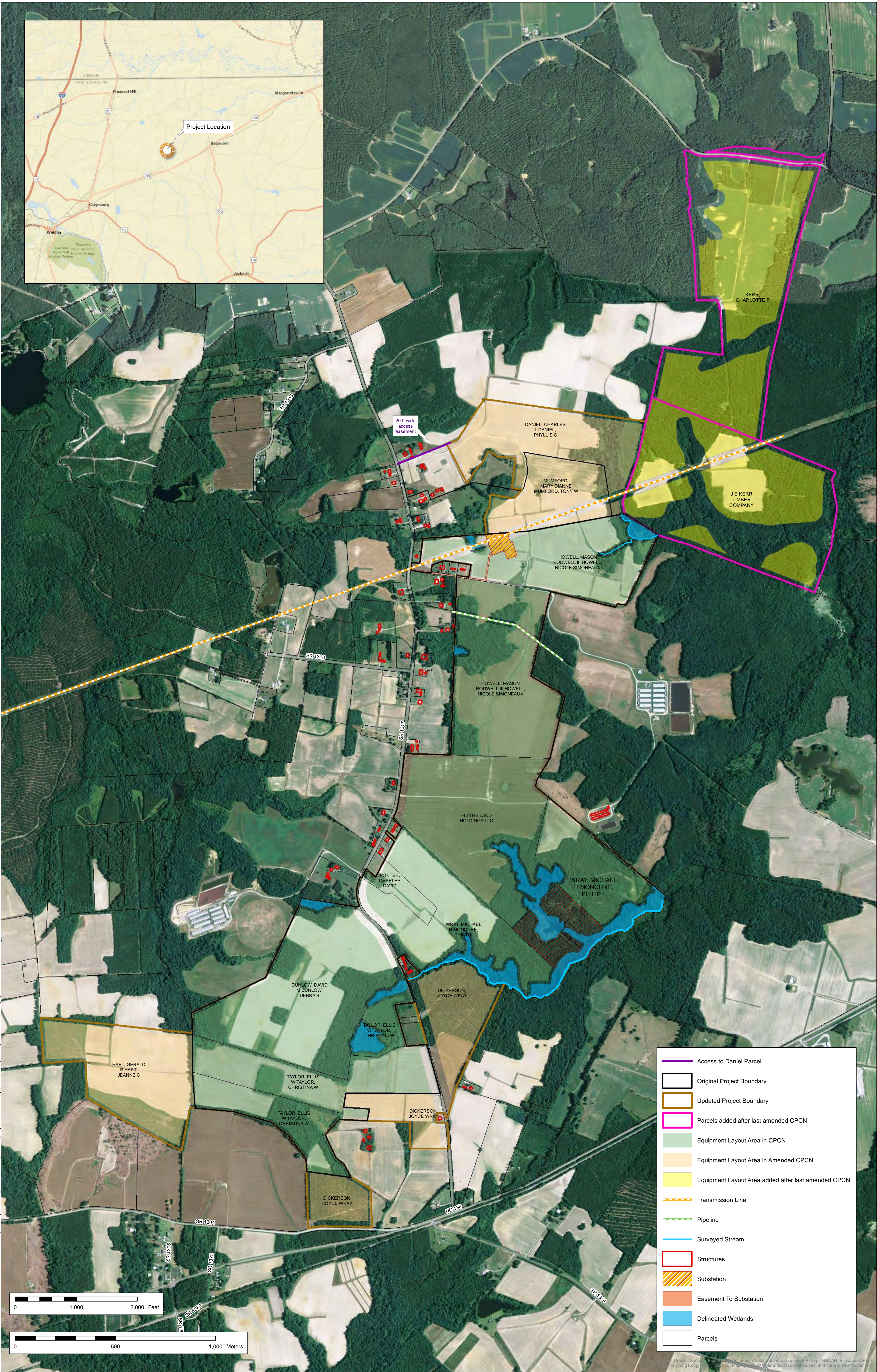
 Doug Copeland

Sworn to and subscribed before me, this the 23rd day of September, 2016.

	<u>Chia-Lin Fan</u>
Notary Public (signature)	(Typed/ Printed Name)

My Commission Expires: July 27, 2020





Source: Buildable Land v11, Geosynx NC One Map, NHD, ESRI | G:\Projects\USA_East\Parcel\05_GIS\052_MapDocs\PermitMap_Pecan.mxd | Last Updated 9/23/2016 by cysnab