

**Renewable Properties, LLC**

879 Sanchez Street

San Francisco, CA 94114

[www.renewprop.com](http://www.renewprop.com)



July 28, 2020

North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, NC 27699-4300

**SP-5195 Sub 0**

**RE: FERC form 556 filing**

To Whom It May Concern,

Pursuant to 18 C.F.R. 292.207(c), attached please find a copy of the Qualifying Facility self-certification for Red Toad Powatan Road Phase 2 LLC (Powatan Road Solar Project) that was filed for re-certification with FERC on July 28, 2020. A soft copy of the filing was sent via email.

Please do not hesitate to reach out with any questions/comments. I appreciate your time and consideration.

I look forward to hearing from you.

Sincerely,

**RENEWABLE PROPERTIES**

Stephanie Loucas

VP, Development

415-449-1528

[stephanie@renewprop.com](mailto:stephanie@renewprop.com)

OFFICIAL COPY

Aug 11 2020

# 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](mailto: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](http://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](mailto: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](mailto: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](mailto: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](mailto:oir_submission@omb.eop.gov)). Include the Control No. 1902-0075 in any correspondence.

## 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](http://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](http://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 11/30/2022

# Form 556

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

Application Information

|  |  |  |
|--|--|--|
| <b>1a</b> Full name of applicant (legal entity on whose behalf qualifying facility status is sought for this facility)<br>Red Toad Powatan Road Phase 2 LLC  |  |  |
| <b>1b</b> Applicant street address<br>879 Sanchez Street   |  |  |
| <b>1c</b> City<br>San Francisco  | <b>1d</b> State/province<br>CA           |  |
| <b>1e</b> Postal code<br>94114   | <b>1f</b> Country (if not United States) | <b>1g</b> Telephone number<br>(530) 518-7669 |
| <b>1h</b> Has the instant facility ever previously been certified as a QF? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>   |  |  |
| <b>1i</b> If yes, provide the docket number of the last known QF filing pertaining to this facility: QF <u>15</u> - <u>761</u> - <u>001</u>  |  |  |
| <b>1j</b> Under which certification process is the applicant making this filing?<br><input checked="" type="checkbox"/> Notice of self-certification (see note below) <input type="checkbox"/> Application for Commission certification (requires filing fee; see "Filing Fee" section on page 3)<br>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.  |  |  |
| <b>1k</b> What type(s) of QF status is the applicant seeking for its facility? (check all that apply)<br><input checked="" type="checkbox"/> Qualifying small power production facility status <input type="checkbox"/> Qualifying cogeneration facility status  |  |  |
| <b>1l</b> What is the purpose and expected effective date(s) of this filing?<br><input type="checkbox"/> Original certification; facility expected to be installed by _____ and to begin operation on _____<br><input checked="" type="checkbox"/> Change(s) to a previously certified facility to be effective on <u>7/27/20</u><br>(identify type(s) of change(s) below, and describe change(s) in the Miscellaneous section starting on page 19)<br><input type="checkbox"/> Name change and/or other administrative change(s)<br><input checked="" type="checkbox"/> Change in ownership<br><input type="checkbox"/> Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output<br><input type="checkbox"/> Supplement or correction to a previous filing submitted on _____<br>(describe the supplement or correction in the Miscellaneous section starting on page 19)  |  |  |
| <b>1m</b> 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.<br><input type="checkbox"/> 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)<br><input type="checkbox"/> The instant facility would comply with the Commission's QF requirements if a petition for waiver submitted concurrently with this application is granted<br><input type="checkbox"/> 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) |  |  |

## 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) Wildcat Renewables, LLC        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | %                         |
| 2)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 3)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 4)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 5)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 6)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 7)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 8)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 9)                                | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |
| 10)                               | Yes <input type="checkbox"/> No <input type="checkbox"/>            | %                         |

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

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

Check here if no such upstream owners exist. ☐

| Full legal names of electric utility or holding company upstream owners | % equity interest |
|---|-------------------|
| 1) Renewable Properties Holdings, LLC                                   | 100 %             |
| 2) Renewable Properties, LLC  | 100 %             |
| 3)  | %                 |
| 4)  | %                 |
| 5)  | %                 |
| 6)  | %                 |
| 7)  | %                 |
| 8)  | %                 |
| 9)  | %                 |
| 10)   | %                 |

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

**5c** Identify the facility operator

Red Toad Powatan Road Phase 2 LLC

|                                |  |            |
|--------------------------------|--|------------|
| Technical Facility Information | Indicate the maximum gross and maximum net electric power production capacity of the facility at the point(s) of delivery by completing the worksheet below. Respond to all items. If any of the parasitic loads and/or losses identified in lines 7b through 7e are negligible, enter zero for those lines.   |            |
|                                | <b>7a</b> The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions   | 2,800 kW   |
|                                | <b>7b</b> Parasitic station power used at the facility to run equipment which is necessary and integral to the power production process (boiler feed pumps, fans/blowers, office or maintenance buildings directly related to the operation of the power generating facility, etc.). If this facility includes non-power production processes (for instance, power consumed by a cogeneration facility's thermal host), do not include any power consumed by the non-power production activities in your reported parasitic station power.   | 180 kW     |
|                                | <b>7c</b> Electrical losses in interconnection transformers  | 180 kW     |
|                                | <b>7d</b> Electrical losses in AC/DC conversion equipment, if any  | 325 kW     |
|                                | <b>7e</b> Other interconnection losses in power lines or facilities (other than transformers and AC/DC conversion equipment) between the terminals of the generator(s) and the point of interconnection with the utility   | 117 kW     |
|                                | <b>7f</b> Total deductions from gross power production capacity = 7b + 7c + 7d + 7e  | 802.0 kW   |
|                                | <b>7g</b> Maximum net power production capacity = 7a - 7f  | 1,998.0 kW |
|                                | <b>7h</b> 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. <p>The facility is a PV distributed generation facility connected to the grid through one Step up transformer. The PV modules will be installed as a tracker and positioned to adequately to absorb the maximum radiation possible to produce electricity. In the field the inverter is the equipment that can transform the dc source coming from the modules to AC required by the utility. The site has all protection equipment to meet NEC and local codes and is design to work automatically and monitored remotely. The PV installation will be built on approximately 15 acres. It will use (7560) 370 watt solar modules and (15) 125 KW inverters.</p> |            |



## Information Required for Cogeneration Facility

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

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

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

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

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

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

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

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

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

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

Yes. Your facility complies with 18 C.F.R. § 292.205(d)(2) by virtue of passing the fundamental use test provided in 18 C.F.R. § 292.205(d)(3). Applicant certifies its understanding that, if it is to rely upon passing the fundamental use test as a basis for complying with 18 C.F.R. § 292.205(d)(2), then the facility must comply with the fundamental use test both in the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years.

No. Your facility does not pass the fundamental use test. Instead, you must provide in the Miscellaneous section starting on page 19 a narrative explanation of and support for why your facility meets the requirement that the electrical, thermal, chemical and mechanical output of an EPA 2005 cogeneration facility is used fundamentally for industrial, commercial, residential or institutional purposes and is not intended fundamentally for sale to an electric utility, taking into account technological, efficiency, economic, and variable thermal energy requirements, as well as state laws applicable to sales of electric energy from a QF to its host facility. Applicants providing a narrative explanation of why their facility should be found to comply with 18 C.F.R. § 292.205(d)(2) in spite of non-compliance with the fundamental use test may want to review paragraphs 47 through 61 of Order No. 671 (accessible from the Commission's QF website at [www.ferc.gov/QF](http://www.ferc.gov/QF)), which provide discussion of the facts and circumstances that may support their explanation. Applicant should also note that the percentage reported above will establish the standard that that facility must comply with, both for the 12-month period beginning with the date the facility first produces electric energy, and in all subsequent calendar years. See Order No. 671 at paragraph 51. As such, the applicant should make sure that it reports appropriate values on lines 11g and 11h above to serve as the relevant annual standard, taking into account expected variations in production conditions.



**Topping-Cycle Operating and  
Efficiency Value Calculation**

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

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

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

|   |  |                |
|---|--|----------------|
| <b>Bottoming-Cycle Operating and<br/>Efficiency Value Calculation</b> | <p>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.</p> <p>If you indicated in line 10a that your facility represents <i>both</i> 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).</p> |                |
|   | <p><b>15a</b> Did installation of the facility in its current form commence on or after March 13, 1980?</p> <p><input type="checkbox"/> 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.</p> <p><input type="checkbox"/> No. Your facility is exempt from the efficiency standard. Skip the rest of page 17.</p>  |                |
|   | <p><b>15b</b> Indicate the annual average rate of net electrical energy output</p>   | <p>kW</p>      |
|   | <p><b>15c</b> Multiply line 15b by 3,412 to convert from kW to Btu/h</p>   | <p>0 Btu/h</p> |
|   | <p><b>15d</b> Indicate the annual average rate of mechanical energy output taken directly off of the shaft of a prime mover for purposes not directly related to power production (this value is usually zero)</p>   | <p>hp</p>      |
|   | <p><b>15e</b> Multiply line 15d by 2,544 to convert from hp to Btu/h</p>   | <p>0 Btu/h</p> |
|   | <p><b>15f</b> Indicate the annual average rate of supplementary energy input from natural gas or oil</p>   | <p>Btu/h</p>   |
|   | <p><b>15g</b> Bottoming-cycle efficiency value = <math>100 * (15c + 15e) / 15f</math></p>  | <p>0 %</p>     |
|   | <p><b>15h</b> Compliance with efficiency standard: Indicate below whether the efficiency value shown in line 15g is greater than or equal to 45%:</p> <p><input type="checkbox"/> Yes (complies with efficiency standard) <input type="checkbox"/> No (does not comply with efficiency standard)</p>   |                |

---

## 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.

---

Change of applicant address from "215 New Gate Loop, Lake Mary, FL 32746" to "879 Sanchez Street, San Francisco, CA 94114" (1a-1e)

Change of direct ownership from "Red Toad Powatan Road Phase 2 LLC" to "Wildcat Renewables, LLC" (5a)

Change of indirect ownership from "none" to "Renewable Properties Holdings, LLC" and "Renewable Properties, LLC" (5b)

Change of description to include "The PV installation will be built on approximately 15 acres. It will use (7560) 370 watt solar modules and (15) 125 KW inverters." (7h)