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March 5, 2021

VIA ELECTRONIC FILING

Ms. Kimberley A. Campbell
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

RE: Duke Energy Progress, LLC's and Duke Energy Carolinas, LLC's Cross-Examination Exhibits
Docket Nos. E-2, Sub 1177 and E-7, Sub 1172

Dear Ms. Campbell:

Please find enclosed for filing in the above-referenced dockets Duke Energy Progress, LLC's and Duke Energy Carolinas, LLC's Cross-Examination Exhibits introduced at the hearing on March 3, 2021.

If you have any questions, please let me know.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

DUKE ENERGY PROGRESS, LLC AND DUKE ENERGY CAROLINAS, LLC'S LIST OF CROSS-EXAMINATION EXHIBITS ATTACHED DOCKET NOS. E-2, SUB 1177 AND E-7, SUB 1172

Attachment No.	Marked Exhibit No.	Description
1	Collins Cross-Examination Exhibit No. 1	FERC Form 556, filed by Alcoa Power Generating Inc., FERC Docket No. QF16-1309, Falls Facility (September 28, 2016)
2	Collins Cross-Examination Exhibit No. 2	FERC Form 556, filed by Alcoa Power Generating Inc., FERC Docket No. QF16-1310, High Rock Facility (September 28, 2016)
3	Collins Cross-Examination Exhibit No. 3	FERC Form 556, filed by Alcoa Power Generating Inc., FERC Docket No. QF16-1311, Tuckertown Facility (September 28, 2016)
4	Collins Cross-Examination Exhibit No. 4	FERC Order Approving Transfer of License, FERC Project No. 2197-109 (December 13, 2016)
5	Collins Cross-Examination Exhibit No. 5	FERC Form 556, filed by Cube Yadkin Generation LLC, FERC Docket No. QF16-1309, and NCUC Docket Nos. SP-9172, Sub 2 and SP-8760, Sub 0), Falls Facility (March 9, 2018)
6	Collins Cross-Examination Exhibit No. 6	FERC Form 556, filed by Cube Yadkin Generation LLC, FERC Docket No. QF16-1310, and NCUC Docket Nos. SP-9172, Sub 0 and SP-8758, Sub 0), High Rock Facility (March 9, 2018)
7	Collins Cross-Examination Exhibit No. 7	FERC Form 556, filed by Cube Yadkin Generation LLC, FERC Docket No. QF16-1311, and NCUC Docket Nos. SP-9172, Sub 1 and SP-8759, Sub 0), Tuckertown Facility (March 9, 2018)

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted)**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
201 Isabella Street

1c City
Pittsburg

1d State/province
PA

1e Postal code
15212-5858

1f Country (if not United States)

1g Telephone number
412 553 4237

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

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

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

☒ Notice of self-certification (see note below)

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

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

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

☒ Qualifying small power production facility status ☐ Qualifying cogeneration facility status

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

☒ Original certification; facility expected to be installed by 1/1/17 and to begin operation on 1/1/17

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

- ☐ Name change and/or other administrative change(s)
- ☐ Change in ownership
- ☐ Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output

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

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

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

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

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

Contact Information

2a Name of contact person
Nick Oliver

2b Telephone number
(412) 553-1392

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☐ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☒ 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) ☐
Alcoa Inc.

2e Street address (if same as Applicant, check here and skip to line 3a) ☐
Alcoa Corporate Center, 6D09
201 Isabella Street

2f City
Pittsburgh

2g State/province
PA

2h Postal code
15212

2i Country (if not United States)

Facility Identification and Location

3a Facility name
Falls

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.075 degrees

Latitude ☒ North (+) ☐ South (-) 35.944 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
Badin

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Stanly

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☐
Duke Energy Progress

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)	Alcoa Power Generating Inc.	Yes ☒ No ☐	100%
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Alcoa Inc.	100%
2)		%
3)		%
4)		%
5)		%
6)		%
7)		%
8)		%
9)		%
10)		%

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

5c Identify the facility operator

Alcoa Power Generating Inc.

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	30,000 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.	1.1 kW
7c Electrical losses in interconnection transformers	0 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	112 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	113.1 kW
7g Maximum net power production capacity = 7a - 7f	29,886.9 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.

Falls Dam is a concrete gravity structure. The development consists of a non-overflow gravity section, a Stoney gate-controlled spillway section, a Tainter gate-controlled spillway section, a trash gate section, and an integral intake/ powerhouse section. The non-overflow gravity section extends from the north end of the spillway section to the river abutment.

The spillway section consists of a Stoney gate section, a Tainter gate section, and a trash gate. There are ten Stoney gates and two Tainter gates to release surplus water during storm or flooding events. The ten Stoney gates are operated by individually fixed electrically powered screw-stem hoists from the spillway deck. Four of the Stoney gates may be remotely operated from the dispatch center in Alcoa, Tennessee, and also manually at the site. The two Tainter gates are operated by a movable, electrically powered hoist from the deck. The trash gate is locally operated by a rising screw stem hoist.

The powerhouse and intake form a single structural unit integral with the dam. The powerhouse is located between the south end of the gate-controlled spillway section and the river abutment. The structure consists of an integral reinforced concrete and concrete gravity substructure and a brick superstructure. The intake structure includes trashracks and six headgates.

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

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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%?

☐ Yes (complies with operating standard) ☐ No (does not comply with operating standard)

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

☐ 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.

☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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

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.

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 *in separate rows*.

	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 ☐ No ☐
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐

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

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.

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 employe 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	Date
David R. Poe	2001 M Street, NW, Suite 900 Washington, DC 20036-3310	9/28/2016

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.

Line 1l)

01/01/1917.

Line 7h)

The Falls powerhouse contains one 10,410 kW S. Morgan Smith vertical Francis turbine unit (Unit 1) and two 11,190 kW Allis Chalmers propeller-type turbine units (Units 2 and 3), each operating under a net head of 54.0 ft, and direct-connected to generators having a total capacity of 33,750 kW (Unit 1 @ 8,750 kW, Units 2 and 3 @ 12,500 kW) for a total generating capacity of 31,130 kW as limited by the generator for Unit 1 and the turbines for Units 2 and 3. The Falls Development has a total hydraulic capacity of 8,570 cfs.

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted)**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
201 Isabella Street

1c City
Pittsburg

1d State/province
PA

1e Postal code
15212-5858

1f Country (if not United States)

1g Telephone number
412 553 4237

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

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

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

☒ Notice of self-certification (see note below)

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

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

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

☒ Qualifying small power production facility status ☐ Qualifying cogeneration facility status

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

☒ Original certification; facility expected to be installed by 1/1/27 and to begin operation on 1/1/27

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

- ☐ Name change and/or other administrative change(s)
- ☐ Change in ownership
- ☐ Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output

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

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

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

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

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

Contact Information

2a Name of contact person
Nick Oliver

2b Telephone number
(412) 553-1392

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☐ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☒ 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) ☐
Alcoa Inc.

2e Street address (if same as Applicant, check here and skip to line 3a) ☐
Alcoa Corporate Center, 6D09
201 Isabella Street

2f City
Pittsburgh

2g State/province
PA

2h Postal code
15212

2i Country (if not United States)

Facility Identification and Location

3a Facility name
High Rock

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.233 degrees

Latitude ☒ North (+) ☐ South (-) 35.601 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
Salisbury

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Davidson

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☒

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)	Alcoa Power Generating Inc.	Yes ☒ No ☐	100%
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Alcoa Inc.	100%
2)		%
3)		%
4)		%
5)		%
6)		%
7)		%
8)		%
9)		%
10)		%

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

5c Identify the facility operator

Alcoa Power Generating Inc.

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	34,500 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.	3.7 kW
7c Electrical losses in interconnection transformers	0 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	0 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	3.7 kW
7g Maximum net power production capacity = 7a - 7f	34,496.3 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.

High Rock Dam is a concrete gravity structure. The dam is comprised of two short non- overflow sections, a Stoney gate-controlled spillway section, and an integral intake/powerhouse section.
The non-overflow sections are located at the east end of the powerhouse and at the west end of the gate-controlled spillway. The gate-controlled spillway section includes ten Stoney gates that release surplus water during flood events. The spillway gates are operated locally at the site by fixed individual electrically powered hoists.
The High Rock powerhouse and intake form a single structural unit integral with the dam. It consists of a concrete substructure containing three water passages and a brick superstructure. The intake structure includes trashracks and six headgates.
The High Rock powerhouse contains three 10,970 kilowatt (kW) vertical Francis turbines, each operating under a net head of 55.0 ft, direct-connected to generators having a total capacity of 41,250 kW (Units 1, 2, and 3 @ 13,750 kW), for a total installed capacity of 32,190 kW as limited by the turbines1. The High Rock Development has a total hydraulic capacity of 10,050 cfs.

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

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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%?

☐ Yes (complies with operating standard) ☐ No (does not comply with operating standard)

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

☐ 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.

☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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

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.

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 *in separate rows*.

	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 ☐ No ☐
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐

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

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.

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 employe 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	Date
David R. Poe	2001 M Street, NW, Suite 900 Washington, DC 20036-3310	9/28/2016

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.

Line 1l)

01/01/1927

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted)**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
201 Isabella Street

1c City
Pittsburg

1d State/province
PA

1e Postal code
15212-5858

1f Country (if not United States)

1g Telephone number
412 553 4237

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

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

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

☒ Notice of self-certification (see note below)

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

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

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

☒ Qualifying small power production facility status ☐ Qualifying cogeneration facility status

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

☒ Original certification; facility expected to be installed by 1/1/62 and to begin operation on 1/1/62

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

- ☐ Name change and/or other administrative change(s)
- ☐ Change in ownership
- ☐ Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output

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

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

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

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

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

Contact Information

2a Name of contact person
Nick Oliver

2b Telephone number
(412) 553-1392

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☐ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☒ 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) ☐
Alcoa Inc.

2e Street address (if same as Applicant, check here and skip to line 3a) ☐
Alcoa Corporate Center, 6D09
201 Isabella Street

2f City
Pittsburgh

2g State/province
PA

2h Postal code
15212

2i Country (if not United States)

Facility Identification and Location

3a Facility name
Tuckertown

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.176 degrees

Latitude ☒ North (+) ☐ South (-) 35.486 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
New London

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Stanly

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☒

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)	Alcoa Power Generating Inc.	Yes ☒ No ☐	100%
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Alcoa Inc.	100%
2)		%
3)		%
4)		%
5)		%
6)		%
7)		%
8)		%
9)		%
10)		%

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

5c Identify the facility operator

Alcoa Power Generating Inc.

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	40,500 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.	2.9 kW
7c Electrical losses in interconnection transformers	0 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	168.5 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	171.4 kW
7g Maximum net power production capacity = 7a - 7f	40,328.6 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.

Tuckertown Dam is a concrete gravity and embankment structure and consists of a rockfill embankment section, an earthfill embankment section, three non-overflow gravity sections, a Tainter gate spillway section, and an integral intake/ powerhouse.

The rockfill embankment is located between the east non-overflow section and the east abutment. It was constructed of dumped rockfill with a sloping impervious core. The earthfill embankment is a homogeneous earthfill section at the west abutment. This section wraps around the adjacent right non-overflow gravity section.

The east non-overflow gravity section is located at the east end of the powerhouse. The west non-overflow gravity section is located at the west end of the gated spillway section. The middle non-overflow section is located between the east end of the gated spillway and the west end of the powerhouse. The gate-controlled spillway section includes eleven Tainter gates that release surplus water during flood events.

The Tuckertown powerhouse and intake form a single structural unit integral with the dam. The powerhouse is located immediately downstream of the intake structure between the east non- overflow and middle non-overflow gravity sections.

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

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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%?

☐ Yes (complies with operating standard) ☐ No (does not comply with operating standard)

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

☐ 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.

☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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

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.

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 *in separate rows*.

	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 ☐ No ☐
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐

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

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.

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 employe 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	Date
David R. Poe	2001 M Street, NW, Suite 900 Washington, DC 20036-3310	9/28/2016

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.

Line 7h)

The structure consists of a concrete substructure containing three water passages and a conventional steel truss and frame structure. The intake structure includes trashracks and six motor operated fixed wheel headgates.

The Tuckertown powerhouse contains three 12,680 kW Kaplan turbines, each operating under a net head of 53.5 ft, direct-connected to generators having a total capacity of 46,665 kW (Units 1, 2, and 3 @ 15,555 kW maximum capacity), for a total installed capacity of 38,040 kW as limited by the turbines. The Tuckertown Development has a total hydraulic capacity of 11,475 cfs.

157 FERC ¶ 62,188
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Alcoa Power Generating Inc.
Cube Yadkin Generation LLC

Project No. 2197-109

ORDER APPROVING TRANSFER OF LICENSE

(Issued December 13, 2016)

1. By application filed July 25, 2016, Alcoa Power Generating Inc. (Alcoa Power or transferor) and Cube Yadkin Generation LLC (Cube Yadkin or transferee) seek Commission approval to transfer the license and substitute the relicense applicant for the Yadkin Hydroelectric Project No. 2197, located on the Yadkin River in Stanly, Montgomery, Davidson, and Rowan counties, North Carolina. The project does not occupy federal lands.

Background

2. A 50-year license for the project was issued to Carolina Aluminum Company on May 19, 1958.[1] The Commission approved a transfer of license to Alcoa Power Generating Inc. on July 17, 2000.[2] On April 25, 2006, Alcoa Power filed a new license application. That license expired on April 30, 2008. Since that time the project has been operating under annual licenses[3] until September 22, 2016, when the Commission issued a new license to Alcoa Power.[4]

3. The Commission issued a public notice of the current application for transfer on August 1, 2016, establishing August 31, 2016 as the deadline for filing comments,

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[1] 19 FPC 704 (1958).

[2] 92 FERC ¶ 62,029 (2000).

[3] Section 15(a)(1) of the FPA, 16 U.S.C. § 808 (a)(i) requires the Commission, at the expiration of a license term, to issue from year-to-year an annual license to the then licensee under the terms and conditions of the prior license until a new license is issued.

[4] 156 FERC ¶ 62,210 (2016). The license term is for a period of 38 years, 7 months. The applicants' requested substitution of the transferee for the transferor as the applicant in the then pending application for a new license for the Yadkin Project is moot due to the issuance of the new license.

motions to intervene,5 and protests. Timely motions to intervene were filed on August 29, 2016, by Trading Ford Historic District Preservation Association (Trading Ford Historic District), and the North Carolina Wildlife Resources Commission (North Carolina Wildlife). On August 30, 2016, timely motions to intervene were filed by American Rivers, New Energy Capital Partners, LLC (New Energy),[6] and Yadkin Riverkeeper, Inc. (Riverkeeper), and on August 31, 2015, timely motions or notices to intervene were filed by Central Park NC (Central Park), North Carolina Department of Environmental Quality (North Carolina Environmental Quality), Stanly County, and the North Carolina Department of Justice (North Carolina Justice).7 Comments were filed on August 30 and August 31, 2016 by the City of Salisbury (Salisbury) and Riverkeeper, respectively.

Commission's Standard for Transfers

4. Section 8 of the Federal Power Act (FPA),[8] which governs license transfers, does not articulate a standard for approving a transfer application.9 The Commission has held that a transfer may be approved on a showing that the transferee is qualified to hold the license and operate the project, and that a transfer is in the public interest![0] Specifically, a license transfer proceeding is a limited inqui$_{ry}$ of the ability of the transferee to carry

[5] If no answer in opposition to a timely motion to intervene is filed within 15 days after the motion to intervene is filed, the movant becomes a party at the end of the 15 day period. If an answer in opposition to a timely motion to intervene is filed not later than 15 days after the motion to intervene is filed, the movant becomes a party only when the motion is expressly granted, 18 C.F.R. § 385.214(c)(1) and (2) (2016).

[6] Alcoa Power and Cube Yadkin filed oppositions to New Energy's motion to intervene, and, on December 7, 2016, the Commission denied the motion. While New Energy is thus not a party to this proceeding, we have fully considered its comments.

[7] Alcoa Power and Cube Yadkin also filed oppositions to North Carolina Justice's motion; the Commission granted the motion on December 7, 2016.

[8] 16 U.S.C. § 801 (2012); *see also* 18 C.F.R. §§ 9.1 -9.3 (2016).

[9] *See Potosi Generating Station, Inc. and Willow Creek Hydro, LLC,* 100 FERC ¶ 61,115 (2002).

[10] *See Wisconsin v.* FERC, 104 F.3d 462 (D.C. Cir. 1997). *See also, e.g.,* Gallia *Hydro Partners and Rathgar Development Associates, LLC,* 110 FERC ¶ 61,237 (2005); 18 C.F.R. pt. 9.3 (2015); *Confederated Salish and Kootenai Tribes,* 153 FERC ¶ 61,217 (2015).

out its responsibilities under the license. In evaluating a license transfer application, we consider the fitness of the transferee to carry out its responsibilities under the license, including the transferee's control over the project's facilities and payment of the project's annual charges under the FPA, and whether the transfer is in that sense in the public interest. Section 8 of the FPA does not, however, require us to revisit all issues that must be considered under FPA section IO(a)(l) before determining whether to license the project itself.[11]

Discussion

A. Cube Yadkin Qualifications

5. Several parties and commenters oppose the transfer based on a general assertion that the transfer is contrary to the public interest. However, none of the commenters or intervenors raises specific issues about the fitness of the transferee to be a licensee. For example, North Carolina Justice asserts that Alcoa's and Cube Yadkin's transfer application does not provide sufficient information about Cube Yadkin's qualifications to be the licensee for the project.

6. We find that Cube Yadkin's transfer application demonstrated that it is qualified to be the licensee for the Yadkin Project. As explained in Cube Hydro's application, Cube Yadkin was formed for the purpose of owning and operating the project. It is authorized to engage in the business of developing, transmitting and distributing power. Cube Yadkin is affiliated with numerous companies (Cube Hydro) involved in the operation and maintenance of hydroelectric projects and will have ready access to their expertise. Numerous Alcoa Power employees that have experience with the Yadkin Project will become employees of Cube Yadkin, or an affiliate of Cube Yadkin, as part of the proposed transaction.[12] Based on the foregoing, there is no basis here to question Cube Hydro's fitness to be a licensee, and we find that the transfer is consistent with the public interest.[13]

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[11] *See New England Power Co. and US Gen New England, Inc,* 83 FERC ,r 61,272 (1998).

[12] Application for Approval of Transfer of License filed July 25, 2016.

[13] In addition, it is the Commission's policy is to scrutinize transfer requests that - as is the case here - are filed during the last five years of a license term to detelmine if the purpose of the transfer is to elude Commission review of a transferor's poor compliance record. *See Eugene Water & Electric Board,* 155 FERC 162,242, at P 19 (2016); *111enominee Company,* 74 FERC '161,023 (1996); and *AER NY-Gen, LLC,* 133 FERC 162,143 (2010). There is no basis in this record to conclude that the transfer application for the Yadkin Project was filed to avoid consideration of a poor compliance *(continued .. .)*

B. Project Impacts and Mitigation Measures

7. The motions to intervene and comments of New Energy, North Carolina Justice, and Riverkeeper raise numerous issues related to the relicensing proceeding, the license itself, and project impacts. Specifically, New Energy argues that the transfer should be denied to allow Cube Yadkin and others the ability to compete for the new license. North Carolina Justice argues that: (1) there is an open question, subject to pending litigation, regarding whether Alcoa Power holds lawful title to all the property rights (specifically, rights to the project waters) as required by the license and (2) the facts and circumstances bearing directly on the 2006 relicense application have changed significantly. Riverkeeper asserts that the license cannot be transferred due to uncertainty surrounding the status and responsibilities of Cube Yadkin under the May 7, 2007 Yadkin Relicensing Settlement Agreement signed by 23 parties to the relicensing proceeding.[14] We find that these arguments, which relate to either the now completed relicensing proceeding or the license itself and the operation of the project, are not relevant to this transfer proceeding. When a license is transferred, the new licensee steps into the shoes of the old licensee, and is subject to any and all requirements to which the old licensee was subject under the license and the Commission's orders thereunder. Moreover, the mere transfer of a license does not alter a project's environmental impacts, or the determination of what mitigation measures are warranted. Consequently a project's environmental impacts and appropriate mitigation measures are not germane in a transfer proceeding. Such arguments are collateral attacks on license orders granting a new license and may not be raised in limited proceeding such as this one.[15]

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record or otherwise give the transferee an advantage in relicensing. Moreover, this concern is moot as the Commission already evaluated the transferor's compliance history, found it satisfactory, and issued a new license. *Alcoa Power Generating Inc.,* 156 FERC ¶ 62,210 at PP 160, 162.

[14] *See Alcoa Power Generating Inc.,* 156 FERC ¶ 62,210 at PP 7, 13 (order issuing new license describing and incorporating in part the Settlement Agreement).

[15] *See Confederated Salish and Kootenai Tribes,* 152 FERC ¶ 62,140 (2015).

C. Reopening the License

8. New Energy, North Carolina Justice, Riverkeeper and Central Park NC also request that the Commission reopen a new license application proceeding for the Yadkin Hydroelectric Project due to the application for transfer. In an earlier proceeding, New Energy filed a request for rehearing of the notice rejecting its motion to reopen the record. In the order denying rehearing,[16] the Commission held that it must only reopen license proceedings where changes in an applicant's plan of development are material, that is, involve significant changes to a project's physical features such that it should be considered an entirely new project.[17] No such changes have occurred in this proceeding.[18]

9. A transferee is subject to any and all requirements to which the old licensee was subject under the license and the Commission's orders thereunder. Moreover, a license transfer, a ministerial action, does not involve any significant changes in the license and does not provide an opportunity to reopen the licensing proceeding. We find no basis for reopening the relicensing proceeding.

10. Given that section 15(c)(1)[19] of the FPA requires that all applications for a new license be filed no later than two years from the date of expiration of an existing license (in this case, by April 30, 2006), by the time that the transfer application was filed, it was almost 10 years too late for a competing application to be filed. In consequence, even if we had been required to reopen the relicensing proceeding, it would have been a meaningless exercise.

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[16] *Alcoa Power Generating Inc.,* 152 FERC ¶ 61,040 (2015).

[17] *See Erie Boulevard Hydropower, L.P.,* 131 FERC ¶ 61,036 at PP 17, 37; *reh'g denied,* 134 FERC ¶ 61,205 at PP 31, 32; *reh'g denied,* 136 FERC ¶ 61,044 (2011); *summarily aff'd, Green Island Power Authority v. FERC,* 497 Fed. Appx. 127 (2d Cir. 2012).

[18] As explained in *Alcoa Power Generating Inc.,* 144 FERC ¶ 61,218, at PP 24-25, the two matters raised by New Energy - the settlement agreement and two water withdrawal agreements - did not constitute material amendments to Alcoa's license application.

[19] 18 U.S.C. § 808(c)(1) (2012).

D. Authority to Transfer an Annual License

11. New Energy asserts that the Commission docs not have the authority under section 15(a)(1) of the FPA to transfer an annual license. In fact, the Commission has held that annual licenses may be transferred.2° In any event, because the new license has been issued to Alcoa Power, this is not a transfer of an annual license, but rather a transfer of a new license.

E. Terms and Conditions of the Transfer

12. The transferee agrees to accept all of the terms and conditions of the license and to be bound by the license as if it were the original licensee. The transferor agrees to pay annual charges that have accrued to the date of the transfer.

13. The transferee will be required to comply with the requirements of the license as though it were the original licensee. Based on the foregoing, transfer of the license for this project is consistent with the Commission's regulations and is in the public interest.

The Director orders:

(A) The transfer of the license for the Yadkin Hydroelectric Project No. 2197 from Alcoa Power Generating Inc. to Cube Yadkin Generation LLC is approved.

(B) Alcoa Power Generating Inc. shall pay all annual charges that accrue up to the effective date of the transfer.

(C) Approval of the transfer is contingent upon: (1) transfer of title of the properties under license, transfer of all project files including all dam safety related documents, and delivery of all license instruments to Cube Yadkin Generation LLC which shall be subject to the tcnns and conditions of the license as though it were the original licensee; and (2) Cube Yadkin Generation LLC acknowledging acceptance of this order and its terms and conditions by signing and returning the attached acceptance sheet. Within 60 days from the date of this order, Cube Yadkin Generation LLC :hall file certified copies of all instruments of conveyance and the signed acceptance sheet.

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[20] *See Niagara Mohawk Corporation,* 88 FERC, 62,082 at p. 64, 153 (1999).

> "..... Section 15(a)(l) requires the yearly issuance of an annual license to the "then licensee" doesn't mean that annual licenses can't be transferred, as the City of Oswego argues. Section 15(a)(l) does not mention transfers of annual licenses, much less bar them." *See e.g. Edwards Manufacturing Company, Inc.,* 84 FERC, 61,227 (1998).

(D) Approval of the transfer is also contingent upon filing of a comprehensive insurance policy that will include business interruption coverage and major loss coverage up to the replacement cost, or any other provisions made by the transferee, that will be available to cover the cost of unexpected maintenance and repairs (e.g., major turbine or generator malfunctions, dam safety repairs) for the project within 60 days from the date of this order.

(E) This order constitutes final agency action. Any party may file a request for rehearing of this order within 30 days from the date of its issuance, as provided in § 313(a) of the FPA, 16 U.S.C. § 825l (2012), and the Commission's regulations at 18 C.F.R. § 385.713 (2016). The filing of a request for rehearing does not operate as a stay of the effective date of this order, or of any other date specified in this order. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

Jennifer Hill
Director
Division of Hydropower Administration
and Compliance

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Julia S. Wood
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March 9, 2018

Chief Clerk's Office
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4300

RE: Cube Yadkin Generation LLC
NCUC Docket No. SP-9172-Sub 2
NCUC Docket No. SP-8760-Sub 0
FERC Docket No. QF16-1309

Dear Chief Clerk:

Pursuant to the Federal Energy Regulatory Commission's ("FERC") regulations, 18 C.F.R. § 292.207(c)(1), please find enclosed the Form 556 of Cube Yadkin Generation LLC filed with FERC today in FERC Docket No.QF16-1309. The attached Form 556 was filed with FERC to reflect a change in ownership of the certified facility. We respectfully request the North Carolina Utilities Commission ("NCUC") please accept for filing the attached Form 556 under NCUC Docket Nos. SP-9172-Sub 2; and SP-8760-Sub 0.

If you have any questions or need further information, please contact the undersigned at the information above.

Respectfully submitted,

Julia S. Wood

Julia S. Wood

Counsel for Cube Yadkin Generation LLC

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted)**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
c/o Cube Hydro Partners, LLC
2 Bethesda Metro Center
Suite 1330

1c City
Bethesda

1d State/province
MD

1e Postal code
20814

1f Country (if not United States)

1g Telephone number
240-482-2714

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: QF16 - 1309 - 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 2/1/17
(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
Eli Hopson

2b Telephone number
240-482-2714

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☒ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☐ 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) ☐
Cube Hydro Partners, LLC

2e Street address (if same as Applicant, check here and skip to line 3a) ☒

2f City

2g State/province

2h Postal code

2i Country (if not United States)

Facility Identification and Location

3a Facility name
Falls

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.075 degrees

Latitude ☒ North (+) ☐ South (-) 35.944 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
Badin

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Stanly

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☒

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)	Cube Yadkin Generation LLC	Yes ☒ No ☐	100 %
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Cube Hydro Carolinas LLC	100 %
2)	Helix Partners LLC	100 %
3)	Helix Holdco LLC	98.5 %
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

Cube Yadkin Generation LLC

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	30,000 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.	1.1 kW
7c Electrical losses in interconnection transformers	0 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	112 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	113.1 kW
7g Maximum net power production capacity = 7a - 7f	29,886.9 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.

Falls Dam is a concrete gravity structure. The development consists of a non-overflow gravity section, a Stoney gate-controlled spillway section, a Tainter gate-controlled spillway section, a trash gate section, and an integral intake/ powerhouse section. The non-overflow gravity section extends from the north end of the spillway section to the river abutment.

The spillway section consists of a Stoney gate section, a Tainter gate section, and a trash gate. There are ten Stoney gates and two Tainter gates to release surplus water during storm or flooding events. The ten Stoney gates are operated by individually fixed electrically powered screw-stem hoists from the spillway deck. Four of the Stoney gates may be remotely operated from the dispatch center in Alcoa, Tennessee, and also manually at the site. The two Tainter gates are operated by a movable, electrically powered hoist from the deck. The trash gate is locally operated by a rising screw stem hoist.

The powerhouse and intake form a single structural unit integral with the dam. The powerhouse is located between the south end of the gate-controlled spillway section and the river abutment. The structure consists of an integral reinforced concrete and concrete gravity substructure and a brick superstructure. The intake structure includes trashracks and six headgates.

Additional facility information is included in the miscellaneous section.

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

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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%?

☐ Yes (complies with operating standard) ☐ No (does not comply with operating standard)

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

☐ 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.

☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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

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.

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 *in separate rows.*

	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 ☐ No ☐
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐

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

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.

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 employe 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	Date
Eli Hopson Cube Hydro Partners, LLC	2 Bethesda Metro Center, Suite 1330, Bethesda, MD 20814	3/9/2018

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.

Section 11 (continued):

Cube Yadkin Generation LLC (Applicant) submits this self-recertifiation to (i) notify the Commission of a change in the ownership of the Falls facility, and (ii) provide contact information for Applicant. Pursuant to a transaction authorized by the Commission in Docket No. EC16-157 (Transaction), on February 1, 2017, Applicant acquired 100% of the ownership interests in the Falls facility from Alcoa Power Generating, Inc. (APGI). See Alcoa Power Generating Inc., et al., 156 FERC ¶ 62,237 (2016). As a result of the Transaction, the Falls facility is now directly owned by Applicant, which is an indirect wholly-owned subsidiary of Helix Partners LLC. APGI no longer owns any interests in the facility.

Section 5b (continued):

Cube Hydro Carolinas LLC is a wholly-owned direct subsidiary of Helix Partners LLC, which is indirectly controlled by I Squared Capital, a private equity investment manager having a series of limited partnership investment and co-investment funds operated by a general partner that is wholly controlled by I Squared Capital.

Section 7h (continued):

The Falls powerhouse contains one 10,410 kW S. Morgan Smith vertical Francis turbine unit (Unit 1) and two 11,190 kW Allis Chalmers propeller-type turbine units (Units 2 and 3), each operating under a net head of 54.0 ft, and direct-connected to generators having a total capacity of 33,750 kW (Unit 1 @ 8,750 kW, Units 2 and 3 @ 12,500 kW) for a total generating capacity of 31,130 kW as limited by the generator for Unit 1 and the turbines for Units 2 and 3. The Falls Development has a total hydraulic capacity of 8,570 cfs.

The Falls facility also includes the limited and discrete interconnection equipment necessary to connect the facility to the transmission grid.

VanNess Feldman LLP

1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, DC 20007
(202) 298-1800 Phone
(202) 338-2416 Fax

Julia S. Wood
(202) 298-1938
jsw@vnf.com

March 9, 2018

Chief Clerk's Office
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4300

RE: Cube Yadkin Generation LLC
NCUC Docket No. SP-9172-Sub 0
NCUC Docket No. SP-8758-Sub 0
FERC Docket No. QF16-1310

Dear Chief Clerk:

Pursuant to the Federal Energy Regulatory Commission's ("FERC") regulations, 18 C.F.R. § 292.207(c)(1), please find enclosed the Form 556 of Cube Yadkin Generation LLC filed with FERC today in FERC Docket No.QF16-1310. The attached Form 556 was filed with FERC to reflect a change in ownership of the certified facility. We respectfully request the North Carolina Utilities Commission ("NCUC") please accept for filing the attached Form 556 under NCUC Docket Nos. SP-9172-Sub 0; and SP-8758-Sub 0.

If you have any questions or need further information, please contact the undersigned at the information above.

Respectfully submitted,

Julia S. Wood

Julia S. Wood

Counsel for Cube Yadkin Generation LLC

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public:** Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted):** Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
c/o Cube Hydro Partners, LLC
2 Bethesda Metro Center
Suite 1330

1c City
Bethesda

1d State/province
MD

1e Postal code
20814

1f Country (if not United States)

1g Telephone number
240-482-2714

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: QF16 - 1310 - 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 2/1/17
(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
Eli Hopson

2b Telephone number
240-482-2714

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☒ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☐ 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) ☐
Cube Hydro Partners, LLC

2e Street address (if same as Applicant, check here and skip to line 3a) ☒

2f City

2g State/province

2h Postal code

2i Country (if not United States)

Facility Identification and Location

3a Facility name
High Rock

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.233 degrees

Latitude ☒ North (+) ☐ South (-) 35.601 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
Salisbury

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Davidson

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☒

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)	Cube Yadkin Generation LLC	Yes ☒ No ☐	100 %
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Cube Hydro Carolinas LLC	100 %
2)	Helix Partners LLC	100 %
3)	Helix Holdco LLC	98.5 %
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

Cube Yadkin Generation LLC

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	34,500 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.	3.7 kW
7c Electrical losses in interconnection transformers	0 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	0 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	3.7 kW
7g Maximum net power production capacity = 7a - 7f	34,496.3 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.

High Rock Dam is a concrete gravity structure. The dam is comprised of two short non- overflow sections, a Stoney gate-controlled spillway section, and an integral intake/powerhouse section.
The non-overflow sections are located at the east end of the powerhouse and at the west end of the gate-controlled spillway. The gate-controlled spillway section includes ten Stoney gates that release surplus water during flood events. The spillway gates are operated locally at the site by fixed individual electrically powered hoists.
The High Rock powerhouse and intake form a single structural unit integral with the dam. It consists of a concrete substructure containing three water passages and a brick superstructure. The intake structure includes trashracks and six headgates.
The High Rock powerhouse contains three 10,970 kilowatt (kW) vertical Francis turbines, each operating under a net head of 55.0 ft, direct-connected to generators having a total capacity of 41,250 kW (Units 1, 2, and 3 @ 13,750 kW), for a total installed capacity of 32,190 kW as limited by the turbines1. The High Rock Development has a total hydraulic capacity of 10,050 cfs.

The High Rock facility also includes the limited and discrete interconnection equipment necessary to connect the facility to the transmission grid.

Information Required for Small Power Production Facility

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

Certification of Compliance with Size Limitations

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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)	%
13h Topping-cycle efficiency value = 100 * (0.5*13a + 13c + 13e) / 13f	%

13i Compliance with operating standard: Is the operating value shown in line 13g greater than or equal to 5%?

Yes (complies with operating standard) No (does not comply with operating standard)

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

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.

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%:

Yes (complies with efficiency standard) 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%:

Yes (complies with efficiency standard) 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

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.

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 *in separate rows*.

	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 No
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes No
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes No

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

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.

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 employe 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	Date
Eli Hopson Cube Hydro Partners, LLC	2 Bethesda Metro Center, Suite 1330, Bethesda, MD 20814	3/9/2018

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.

Section 11 (continued):

Cube Yadkin Generation LLC (Applicant) submits this self-recertifiation to (i) notify the Commission of a change in the ownership of the High Rock facility, and (ii) provide contact information for Applicant. Pursuant to a transaction authorized by the Commission in Docket No. EC16-157 (Transaction), on February 1, 2017, Applicant acquired 100% of the ownership interests in the High Rock facility from Alcoa Power Generating, Inc. (APGI). See Alcoa Power Generating Inc., et al., 156 FERC ¶ 62,237 (2016). As a result of the Transaction, the High Rock facility is now directly owned by Applicant, which is an indirect wholly-owned subsidiary of Helix Partners LLC. APGI no longer owns any interests in the facility.

Section 5b (continued):

Cube Hydro Carolinas LLC is a wholly-owned direct subsidiary of Helix Partners LLC, which is indirectly controlled by I Squared Capital, a private equity investment manager having a series of limited partnership investment and co-investment funds operated by a general partner that is wholly controlled by I Squared Capital.

VanNess Feldman LLP

1050 Thomas Jefferson Street, NW
Seventh Floor
Washington, DC 20007
(202) 298-1800 Phone
(202) 338-2416 Fax

Julia S. Wood
(202) 298-1938
jsw@vnf.com

March 9, 2018

Chief Clerk's Office
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4300

RE: Cube Yadkin Generation LLC
NCUC Docket No. SP-9172-Sub 1
NCUC Docket No. SP-8759-Sub 0
FERC Docket No. QF16-1311

Dear Chief Clerk:

Pursuant to the Federal Energy Regulatory Commission's ("FERC") regulations, 18 C.F.R. § 292.207(c)(1), please find enclosed the Form 556 of Cube Yadkin Generation LLC filed with FERC today in FERC Docket No.QF16-1311. The attached Form 556 was filed with FERC to reflect a change in ownership of the certified facility. We respectfully request the North Carolina Utilities Commission ("NCUC") please accept for filing the attached Form 556 under NCUC Docket Nos. SP-9172-Sub 1; and SP-8759-Sub 0.

If you have any questions or need further information, please contact the undersigned at the information above.

Respectfully submitted,

Julia S. Wood

Julia S. Wood

Counsel for Cube Yadkin Generation LLC

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 (oira_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 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 *not* 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.

Geographic Coordinates

If a street address does not exist for your facility, then line 3c of the Form 556 requires you to report your facility's geographic coordinates (latitude and longitude). Geographic coordinates may be obtained from several different sources. You can find links to online services that show latitude and longitude coordinates on online maps by visiting the Commission's QF webpage at www.ferc.gov/QF and clicking the Geographic Coordinates link. You may also be able to obtain your geographic coordinates from a GPS device, Google Earth (available free at http://earth.google.com), a property survey, various engineering or construction drawings, a property deed, or a municipal or county map showing property lines.

Filing Privileged Data or Critical Energy Infrastructure Information in a Form 556

The Commission's regulations provide procedures for applicants to either (1) request that any information submitted with a Form 556 be given privileged treatment because the information is exempt from the mandatory public disclosure requirements of the Freedom of Information Act, 5 U.S.C. § 552, and should be withheld from public disclosure; or (2) identify any documents containing critical energy infrastructure information (CEII) as defined in 18 C.F.R. § 388.113 that should not be made public.

If you are seeking privileged treatment or CEII status for any data in your Form 556, then you must follow the procedures in 18 C.F.R. § 388.112. See www.ferc.gov/help/filing-guide/file-ceii.asp for more information.

Among other things (see 18 C.F.R. § 388.112 for other requirements), applicants seeking privileged treatment or CEII status for data submitted in a Form 556 must prepare and file both (1) a complete version of the Form 556 (containing the privileged and/or CEII data), and (2) a public version of the Form 556 (with the privileged and/or CEII data redacted). Applicants preparing and filing these different versions of their Form 556 must indicate below the security designation of this version of their document. If you are *not* seeking privileged treatment or CEII status for any of your Form 556 data, then you should not respond to any of the items on this page.

☐ **Non-Public**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This non-public version of the applicant's Form 556 contains all data, including the data that is redacted in the (separate) public version of the applicant's Form 556.
☐ **Public (redacted)**: Applicant is seeking privileged treatment and/or CEII status for data contained in the Form 556 lines indicated below. This public version of the applicants's Form 556 contains all data except for data from the lines indicated below, which has been redacted.
Privileged: Indicate below which lines of your form contain data for which you are seeking privileged treatment
Critical Energy Infrastructure Information (CEII): Indicate below which lines of your form contain data for which you are seeking CEII status

The eFiling process described on page 2 will allow you to identify which versions of the electronic documents you submit are public, privileged and/or CEII. The filenames for such documents should begin with "Public", "Priv", or "CEII", as applicable, to clearly indicate the security designation of the file. Both versions of the Form 556 should be unaltered PDF copies of the Form 556, as available for download from www.ferc.gov/QF. To redact data from the public copy of the submittal, simply omit the relevant data from the Form. For numerical fields, leave the redacted fields blank. For text fields, complete as much of the field as possible, and replace the redacted portions of the field with the word "REDACTED" in brackets. Be sure to identify above all fields which contain data for which you are seeking non-public status.

The Commission is not responsible for detecting or correcting filer errors, including those errors related to security designation. If your documents contain sensitive information, make sure they are filed using the proper security designation.

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

Application Information

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

1b Applicant street address
c/o Cube Hydro Partners, LLC
2 Bethesda Metro Center
Suite 1330

1c City: Bethesda

1d State/province: MD

1e Postal code: 20814

1f Country (if not United States):

1g Telephone number: 240-482-2714

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 16 - 1311 - 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 2/1/17
(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
Eli Hopson

2b Telephone number
240-482-2714

2c Which of the following describes the contact person's relationship to the applicant? (check one)

- ☐ Applicant (self)
- ☐ Employee, owner or partner of applicant authorized to represent the applicant
- ☒ Employee of a company affiliated with the applicant authorized to represent the applicant on this matter
- ☐ 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) ☐
Cube Hydro Partners, LLC

2e Street address (if same as Applicant, check here and skip to line 3a) ☒

2f City

2g State/province

2h Postal code

2i Country (if not United States)

Facility Identification and Location

3a Facility name
Tuckertown

3b Street address (if a street address does not exist for the facility, check here and skip to line 3c) ☒

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 ☐ East (+) ☒ West (-) 80.176 degrees

Latitude ☒ North (+) ☐ South (-) 35.486 degrees

3d City (if unincorporated, check here and enter nearest city) ☒
New London

3e State/province
North Carolina

3f County (or check here for independent city) ☐
Stanly

3g Country (if not United States)

Transacting Utilities

Identify the electric utilities that are contemplated to transact with the facility.

4a Identify utility interconnecting with the facility
Duke Energy Carolinas and Duke Energy Progress

4b Identify utilities providing wheeling service or check here if none ☒

4c Identify utilities purchasing the useful electric power output or check here if none ☒

4d Identify utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service or check here if none ☒

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)	Cube Yadkin Generation LLC	Yes ☒ No ☐	100 %
2)		Yes ☐ No ☐	%
3)		Yes ☐ No ☐	%
4)		Yes ☐ No ☐	%
5)		Yes ☐ No ☐	%
6)		Yes ☐ No ☐	%
7)		Yes ☐ No ☐	%
8)		Yes ☐ No ☐	%
9)		Yes ☐ No ☐	%
10)		Yes ☐ No ☐	%

☐ 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)	Cube Hydro Carolinas LLC	100 %
2)	Helix Partners LLC	100 %
3)	Helix Holdco LLC	98.5 %
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

Cube Yadkin Generation LLC

Energy Input

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

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

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

☐ Waste fuel listed in 18 C.F.R. § 292.202(b) (specify one of the following)

- ☐ Anthracite culm produced prior to July 23, 1985
- ☐ Anthracite refuse that has an average heat content of 6,000 Btu or less per pound and has an average ash content of 45 percent or more
- ☐ Bituminous coal refuse that has an average heat content of 9,500 Btu per pound or less and has an average ash content of 25 percent or more
- ☐ Top or bottom subbituminous coal produced on Federal lands or on Indian lands that has been determined to be waste by the United States Department of the Interior's Bureau of Land Management (BLM) or that is located on non-Federal or non-Indian lands outside of BLM's jurisdiction, provided that the applicant shows that the latter coal is an extension of that determined by BLM to be waste
- ☐ Coal refuse produced on Federal lands or on Indian lands that has been determined to be waste by the BLM or that is located on non- Federal or non-Indian lands outside of BLM's jurisdiction, provided that applicant shows that the latter is an extension of that determined by BLM to be waste
- ☐ Lignite produced in association with the production of montan wax and lignite that becomes exposed as a result of such a mining operation
- ☐ Gaseous fuels (except natural gas and synthetic gas from coal) (describe on page 19)
- ☐ Waste natural gas from gas or oil wells (describe on page 19 how the gas meets the requirements of 18 C.F.R. § 2.400 for waste natural gas; include with your filing any materials necessary to demonstrate compliance with 18 C.F.R. § 2.400)
- ☐ Materials that a government agency has certified for disposal by combustion (describe on page 19)
- ☐ Heat from exothermic reactions (describe on page 19) ☐ Residual heat (describe on page 19)
- ☐ Used rubber tires ☐ Plastic materials ☐ Refinery off-gas ☐ Petroleum coke

☐ Other waste energy input that has little or no commercial value and exists in the absence of the qualifying facility industry (describe in the Miscellaneous section starting on page 19; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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

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

Technical Facility Information

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

7a The maximum gross power production capacity at the terminals of the individual generator(s) under the most favorable anticipated design conditions	40,500 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.	2.9 kW
7c Electrical losses in interconnection transformers	0 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	168.5 kW
7f Total deductions from gross power production capacity = 7b + 7c + 7d + 7e	171.4 kW
7g Maximum net power production capacity = 7a - 7f	40,328.6 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.

Tuckertown Dam is a concrete gravity and embankment structure and consists of a rockfill embankment section, an earthfill embankment section, three non-overflow gravity sections, a Tainter gate spillway section, and an integral intake/ powerhouse.
The rockfill embankment is located between the east non-overflow section and the east abutment. It was constructed of dumped rockfill with a sloping impervious core. The earthfill embankment is a homogeneous earthfill section at the west abutment. This section wraps around the adjacent right non-overflow gravity section.
The east non-overflow gravity section is located at the east end of the powerhouse. The west non-overflow gravity section is located at the west end of the gated spillway section. The middle non-overflow section is located between the east end of the gated spillway and the west end of the powerhouse. The gate-controlled spillway section includes eleven Tainter gates that release surplus water during flood events.
The Tuckertown powerhouse and intake form a single structural unit integral with the dam. The powerhouse is located immediately downstream of the intake structure between the east non- overflow and middle non-overflow gravity sections.

Additional facility information is included in the miscellaneous section.

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

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) *as amended by* Pub. L. 102-46, 105 Stat. 249 (1991)), respond to lines 8a through 8e below (as applicable).

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.

Check here if no such facilities exist. ☒

	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

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

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?

☐ Yes (continue at line 8c below) ☒ No (skip lines 8c through 8e)

8c Was the original notice of self-certification or application for Commission certification of the facility filed on or before December 31, 1994? Yes ☐ No ☐

8d Did construction of the facility commence on or before December 31, 1999? Yes ☐ No ☐

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 ☐ No ☐ 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.

Certification of Compliance with Fuel Use Requirements

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.

9a Certification of compliance with 18 C.F.R. § 292.204(b) with respect to uses of fossil fuel:

☒ Applicant certifies that the facility will use fossil fuels *exclusively* for the purposes listed above.

9b Certification of compliance with 18 C.F.R. § 292.204(b) with respect to amount of fossil fuel used annually:

☒ 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.

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)

☐ Topping-cycle cogeneration ☐ 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
☐	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.
☐	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.
☐	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.
☐	Diagram must specify average gross electric output in kW or MW for each generator.
☐	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.
☐	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 *liquid only* (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).
☐	Diagram must specify working fluid flow conditions at input to and output from each steam turbine or other expansion turbine or back-pressure turbine.
☐	Diagram must specify working fluid flow conditions at delivery to and return from each thermal application.
☐	Diagram must specify working fluid flow conditions at make-up water inputs.

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

EPAct 2005 cogeneration facilities: The Energy Policy Act of 2005 (EPAct 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 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 EPAct 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 Select thermal host's use of thermal output	Btu/h
2)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
3)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
4)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
5)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h
6)		Select thermal host's relationship to facility Select thermal host's use of thermal output	Btu/h

☐ 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%?

☐ Yes (complies with operating standard) ☐ No (does not comply with operating standard)

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

☐ 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.

☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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%:

☐ Yes (complies with efficiency standard) ☐ 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

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.

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 *in separate rows.*

	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 ☐ No ☐
2)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐
3)		Select thermal host's relationship to facility Select thermal host's process type	Yes ☐ No ☐

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

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.

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 employe 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	Date
Eli Hopson Cube Hydro Partners, LLC	2 Bethesda Metro Center, Suite 1330, Bethesda, MD 20814	3/9/2018

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.

Section 1l (continued):

Cube Yadkin Generation LLC (Applicant) submits this self-recertifiation to (i) notify the Commission of a change in the ownership of the Tuckertown facility, and (ii) provide contact information for Applicant. Pursuant to a transaction authorized by the Commission in Docket No. EC16-157 (Transaction), on February 1, 2017, Applicant acquired 100% of the ownership interests in the Tuckertown facility from Alcoa Power Generating, Inc. (APGI). See Alcoa Power Generating Inc., et al., 156 FERC ¶ 62,237 (2016). As a result of the Transaction, the Tuckertown facility is now directly owned by Applicant, which is an indirect wholly-owned subsidiary of Helix Partners LLC. APGI no longer owns any interests in the facility.

Section 5b (continued):

Cube Hydro Carolinas LLC is a wholly-owned direct subsidiary of Helix Partners LLC, which is indirectly controlled by I Squared Capital, a private equity investment manager having a series of limited partnership investment and co-investment funds operated by a general partner that is wholly controlled by I Squared Capital.

Section 7h (continued):

The structure consists of a concrete substructure containing three water passages and a conventional steel truss and frame structure. The intake structure includes trashracks and six motor operated fixed wheel headgates.

The Tuckertown powerhouse contains three 12,680 kW Kaplan turbines, each operating under a net head of 53.5 ft, direct-connected to generators having a total capacity of 46,665 kW (Units 1, 2, and 3 @ 15,555 kW maximum capacity), for a total installed capacity of 38,040 kW as limited by the turbines. The Tuckertown Development has a total hydraulic capacity of 11,475 cfs.

The Tuckertown facility also includes the limited and discrete interconnection equipment necessary to connect the facility to the transmission grid.

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's and Duke Energy Carolinas, LLC's Cross-Examination Exhibits, in Docket Nos. E-2, Sub 1177 and E-7, Sub 1172 has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This the 5th day of March, 2021.

Kendrick C. Fentress

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