

FERC Form No. 556
18 C.F.R. § 131.80

CERTIFICATION OF QUALIFYING FACILITY STATUS FOR AN EXISTING OR A
PROPOSED SMALL POWER PRODUCTION OR COGENERATION FACILITY

INFORMATION ABOUT COMPLIANCE

Compliance with the information collection requirements established by the FERC Form No. 556 is required to obtain and maintain status as a qualifying facility. *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.

SUBMITTING COMMENTS ON PUBLIC REPORTING BURDEN

The estimated burden for completing FERC Form No. 556, including gathering and reporting information, is 4 hours for self-certifications and 38 hours for applications for Commission certification. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the following: Michael Miller, Office of the Executive Director (ED-34), Federal Energy Regulatory Commission, 888 First Street NE., Washington, DC 20426; 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.

GENERAL INSTRUCTIONS

Complete this form by replacing bold text below with responses to each item, as required.

PART A: GENERAL INFORMATION TO BE SUBMITTED BY ALL APPLICANTS

1a. Full name of applicant: [Note: Applicant is the legal entity submitting this form, not the individual employee making the filing. Generally, the Applicant will be a company, corporation or organization, unless the facility is owned directly by an individual or individuals.]

Patrick Chapman, an Individual

Docket Number assigned to the immediately preceding submittal filed with the Commission in connection with the instant facility, if any:

None.

Purpose of instant filing (self-certification or self-recertification [18 C.F.R. § 292.207(a)(1)], or application for Commission certification or recertification [18 C.F.R. §§ 292.207(b) and (d)(2)]):

Self-Certification.

1b. Full address of applicant:

**3207 Katie Lynn Dr., Champaign, IL 61822, current
2851 E. Stone Creek Blvd., Urbana, IL 61802, as of Aug 10, 2007**

1c. Indicate the owner(s) of the facility (including the percentage of ownership held by any electric utility or electric utility holding company, or by any persons owned by either) and the operator of the facility.

Facility is owned 100% by Patrick Chapman, an individual, not an electric utility.

The operator is Patrick Chapman.

Additionally, state whether or not any of the non-electric utility owners or their upstream owners are engaged in the generation or sale of electric power, or have any ownership or operating interest in any electric facilities other than qualifying facilities.

The owner is not engaged in any other sale of electricity other than proposed in this Qualifying Facility.

In order to facilitate review of the application, the applicant may also provide an ownership chart identifying the upstream ownership of the facility. Such chart should indicate ownership percentages where appropriate.

1d. Signature of authorized individual evidencing accuracy and authenticity of information provided by applicant: [Note: A signature on a filing shall constitute a certificate that (1) the signer has read the filing and knows its contents; (2) the contents are true as stated, to the best knowledge and belief of the signer; and (3) the signer possesses full power and authority to sign the filing. A person submitting a self-certification electronically via eFiling may use typed characters representing their name to show that the person has signed the document. *See* 18 C.F.R. § 385.2005.]

 6/13/07

2. Person to whom communications regarding the filed information may be addressed:

Name: **Patrick Chapman**

Title: **An Individual**

Telephone number: **217 649 8911**

Mailing address: **3207 Katie Lynn Drive, Champaign, IL 61822 (current); 2851 E. Stone Creek Blvd., Urbana, IL 61802 (as of Aug. 10, 2007)**

3a. Location of facility to be certified:

State: **Illinois**

County: **Champaign**

City or town: **Urbana**

Street address (if known): **2851 E. Stone Creek Blvd., Urbana, IL 61802**

3b. Indicate the electric utilities that are contemplated to transact with the qualifying facility (if known) and describe the services those electric utilities are expected to provide:

Ameren CILCO

Indicate utilities interconnecting with the facility and/or providing wheeling service [18 C.F.R. §§ 292.303(c) and (d)]:

Ameren CILCO

Indicate utilities purchasing the useful electric power output [18 C.F.R. §§ 292.101(b)(2), 292.202(g) and 292.303(a)]:

Ameren CILCO

Indicate utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service [18 C.F.R. §§ 292.101(b)(3), (b)(8), 292.303(b) and 292.305(b)]:

Ameren CILCO

4a. Describe the principal components of the facility including boilers, prime movers and electric generators, and explain their operation. Include transmission lines, transformers and switchyard equipment, if included as part of the facility.

The facility will be a 2.87 kW (DC rating) solar-photovoltaic power system consisting of 14 205-W SunPower PV modules, 3300 W inverter, and

appropriate safety features.

4b. Indicate the maximum gross and maximum net electric power production capacity of the facility at the point(s) of delivery and show the derivation. [Note: Maximum gross output is the maximum amount of power that the facility is able to produce, measured at the terminals of the generator(s). Maximum net output is maximum gross output minus (1) any auxiliary load for devices that are necessary and integral to the power production process (fans, pumps, etc.), and (2) any losses incurred from the generator(s) to the point of delivery. If any electric power is consumed at the location of the QF (or thermal host) for purposes not related to the power production process, such power should not be subtracted from gross output for purposes of reporting maximum net output here.]

Gross output: **2.87 kW**

Net output: **2.87 kW**

Derivation (assumptions about losses, auxiliary load or lack thereof, and calculation of gross and net output):

This is the maximum rated output of the PV modules. The modules are to be mounted on the applicant's private residence, which ordinarily will reduce the net output, but in some cases (all electrical loads disabled) the net output could be the full rated power of the array.

4c. Indicate the actual or expected installation and operation dates of the facility, or the actual or expected date of completion of the reported modification to the facility:

The expected installation date is August 1, 2007. The expected operation date is August 10, 2007.

4d. Describe the primary energy input (e.g., hydro, coal, oil [18 C.F.R. § 292.202(l)], natural gas [18 C.F.R. § 292.202(k)], solar, geothermal, wind, waste, biomass [18 C.F.R. § 292.202(a)], or other). For a waste energy input that does not fall within one of the categories on the Commission's list of previously approved wastes, demonstrate that such energy input has little or no current commercial value and that it exists in the absence of the qualifying facility industry [18 C.F.R. § 292.202(b)].

Solar.

5. Provide the average annual hourly energy input in terms of Btu for the following fossil fuel energy inputs, and provide the related percentage of the total average annual hourly 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)]:

Natural gas: **None.**

Oil: **None.**

Coal (applicable only to a small power production facility): **None.**

6. Discuss any particular characteristic of the facility which the cogenerator or small power producer believes might bear on its qualifying status.

None.

PART B: DESCRIPTION OF THE SMALL POWER PRODUCTION FACILITY

Items 7 and 8 only need to be answered by applicants seeking certification as a small power production facility. Applicants for certification as a cogeneration facility may delete Items 7 and 8 from their application, or enter "N/A" at both items.

7. Describe how fossil fuel use will not exceed 25 percent of the total annual energy input limit [18 C.F.R § 292.202(j) and 292.204(b)]. Also, describe how the use of fossil fuel will be limited to the following purposes to conform to Federal Power Act section 3(17)(B): ignition, start-up, testing, flame stabilization, control use, and minimal amounts of fuel required to alleviate or prevent unanticipated equipment outages and emergencies directly affecting the public.

N/A – doesn't use fossil fuel.

8. If the facility reported herein is not an eligible solar, wind, waste or geothermal facility, and if any other non-eligible facility located within one mile of the instant facility is owned by any of the entities (or their affiliates) reported in Part A at item 1c above and uses the same primary energy input, provide the following information about the other facility for the purpose of demonstrating that the total of the power production capacities of these facilities does not exceed 80 MW [18 C.F.R § 292.204(a)]: [See definition of an "eligible facility" below. Note that an "eligible facility" is a specific type of small power production facility that is eligible for special treatment under the Wind, Waste and Geothermal Power Production Incentives Act of 1990, as subsequently amended in 1991, and should not be confused with facilities that are generally eligible for QF status.]

Facility name, if any (as reported to the Commission):

N/A.

Commission Docket Number:

N/A.

Name of common owner:

N/A.

Common primary energy source used as energy input:

N/A.

Power production capacity (MW):

N/A.

An eligible solar, wind, waste or geothermal facility, as defined in Section 3(17)(E) of the Federal Power Act, is a small power production facility that produces electric energy solely by the use, as a primary energy input, of solar, wind, waste or geothermal resources, for which either an application for Commission certification of qualifying status [18 C.F.R § 292.207(b)] or a notice of self-certification of qualifying status [18 C.F.R § 292.207(a)] was submitted to the Commission not later than December 31, 1994, and for which construction of such facility commences not later than December 31, 1999, or if not, reasonable diligence is exercised toward the completion of such facility, taking into account all factors relevant to construction of the facility.

PART C: DESCRIPTION OF THE COGENERATION FACILITY

Items 9 through 15 only need to be answered by applicants seeking certification as a cogeneration facility. Applicants for certification as a small power production facility may delete Items 9 through 15 from their application, or enter "N/A" at each item.

9. Describe the cogeneration system [18 C.F.R §§ 292.202(c) and 292.203(b)], and state whether the facility is a topping-cycle [18 C.F.R § 292.202(d)] or bottoming-cycle [18 C.F.R § 292.202(e)] cogeneration facility.

N/A.

10. To demonstrate the sequentiality of the cogeneration process [18 C.F.R § 292.202(s)] and to support compliance with other requirements such as the operating and efficiency standards (Item 11 below), provide a mass and heat balance (cycle) diagram depicting average annual hourly operating conditions. Also, provide:

Using lower heating value [18 C.F.R § 292.202(m)], all fuel flow inputs in Btu/hr., separately indicating fossil fuel inputs for any supplementary firing in Btu/hr. [18 C.F.R §

292.202(f)]:

N/A.

Average net electric output (kW or MW) [18 C.F.R § 292.202(g)]:

N/A.

Average net mechanical output in horsepower [18 C.F.R § 292.202(g)]:

N/A.

Number of hours of operation used to determine the average annual hourly facility inputs and outputs:

N/A.

Working fluid (e.g., steam) flow conditions at input and output of prime mover(s) and at delivery to and return from each useful thermal application, including flow rates (lbs./hr.), temperature (deg. F), pressure (psia), and enthalpy (Btu/lb.):

N/A.

11. Compute the operating value [applicable to a topping-cycle facility under 18 C.F.R § 292.205(a)(1)] and the efficiency value [18 C.F.R §§ 292.205(a)(2) and (b)], based on the information provided in and corresponding to item 10, as follows:

Pt = Average annual hourly useful thermal energy output

Pe = Average annual hourly electrical output

Pm = Average annual hourly mechanical output

Pi = Average annual hourly energy input (natural gas or oil)

Ps = Average annual hourly energy input for supplementary firing (natural gas or oil)

Operating standard = 5% or more

Operating value = $Pt / (Pt + Pe + Pm)$

N/A.

Efficiency standard applicable to natural gas and oil fuel used in a topping-cycle facility:

= 45% or more when operating value is less than 15%, or 42.5% or more when operating

value is equal to or greater than 15%.

$$\text{Efficiency value} = (P_e + P_m + 0.5P_t) / (P_i + P_s)$$

N/A.

Efficiency standard applicable to natural gas and oil fuel used for supplementary firing component of a bottoming-cycle facility:

= 45% or more

$$\text{Efficiency value} = (P_e + P_m) / P_s$$

N/A.

FOR TOPPING-CYCLE COGENERATION FACILITIES

Items 12 and 13 only need to be answered by applicants seeking certification as a topping-cycle cogeneration facility. Applicants for certification as a small power production facility or bottoming-cycle cogeneration facility may delete Items 12 and 13 from their application, or enter "N/A" at each item.

12. Identify the entity (i.e., thermal host) which will purchase the useful thermal energy output from the facility [18 C.F.R § 292.202(h)]. Indicate whether the entity uses such output for the purpose of space and water heating, space cooling, and/or process use.

N/A.

13. In connection with the requirement that the thermal energy output be useful [18 C.F.R § 292.202(h)]:

For process uses by commercial or industrial host(s), describe each process (or group of similar processes using the same quality of steam) and provide the average annual hourly thermal energy made available to the process, less process return. For a complex system, where the primary steam header at the host-side is divided into various sub-uses, each having different pressure and temperature characteristics, describe the processes associated with each sub-use and provide the average annual hourly thermal energy delivered to each sub-use, less process return from such sub-use. Provide a diagram showing the main steam header and the sub-uses with other relevant information such as the average header pressure (psia), the temperature (deg.F), the enthalpy (Btu/lb.), and the flow (lb./hr.), both in and out of each sub-use. For space and water heating, describe the type of heating involved (e.g., office space heating, domestic water heating) and

provide the average annual hourly thermal energy delivered and used for such purpose. For space cooling, describe the type of cooling involved (e.g., office space cooling) and provide the average annual hourly thermal energy used by the chiller.

N/A.

FOR BOTTOMING-CYCLE FACILITIES

Item 14 only needs to be answered by applicants seeking certification as a bottoming-cycle cogeneration facility. Applicants for certification as a small power production facility or topping-cycle cogeneration facility may delete Item 14 from their application, or enter "N/A."

14. Provide a description of the commercial or industrial process or other thermal application to which the energy input to the system is first applied and from which the reject heat is then used for electric power production.

N/A.

FOR NEW COGENERATION FACILITIES

Response to Item 15 is only required for certain applicants for qualified cogeneration facility status, as described below. Applicants for small power production facilities or for cogeneration facilities not meeting the criteria outlined below may delete Item 15 from their application, or enter "N/A." In addition, per 18 C.F.R. § 292.205(d)(4) all cogeneration facilities 5 MW and smaller are presumed to comply with the requirements of 18 C.F.R. § 292.205(d)(1) and (d)(2), and therefore need not respond to Item 15. For those applicants required to respond to Item 15, *see* 18 C.F.R. § 292.205(d) and Order No. 671 for more information on making the demonstrations required in Item 15.

15. For any cogeneration facility that had not filed a notice of self-certification or an application for Commission certification under 18 C.F.R. § 292.207 prior to February 2, 2006, also show:

(i) The thermal energy output of the cogeneration facility is used in a productive and beneficial manner [18 C.F.R §§ 292.205(d)(1), (d)(4) and (d)(5)]; and

(ii) The electrical, thermal, chemical and mechanical output of the 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 [18 C.F.R §§ 292.205(d)(2), (d)(3) and (d)(4)].

N/A.