

City of Danville 1040  
Monument Street  
Danville, VA 24541



March 16, 2010

William F. Stephens Director of the Division of Energy  
Regulation Commonwealth of Virginia State Corporation  
Commission

P.O. Box 1197 Richmond,  
Virginia 23218

RECEIVED  
APR 12 2010

DIVISION OF ENERGY REGULATION  
STATE CORPORATION COMMISSION

RE: City of Danville's Community Market Solar Photovoltaic System

Dear William F. Stephens:

The purpose of this letter is to inform the State Corporation Commission (SCC) of the intention of the City of Danville to construct an electric generating facility in the Commonwealth of Virginia. Pursuant to 20VAC5-302-10, this letter shall set forth the location, size and fuel type of the facility.

location: Danville Community Market  
629 Craighead Street  
Danville, VA 24541  
Size: 36.19kW DC (STC)  
Fuel Type: Solar

This facility will comply with all other requirements of federal, state and local law. Please reference the enclosures including the electrical permit obtained from the City of Danville and the FERC form 556: Certification of Qualifying Facility (QF) Status for an Existing or a Proposed Small Power Production or Cogeneration Facility Docket Number QF10-398-000.

Sincerely,

Ken Ashworth Director of  
Power and light

Enclosures (2)

CITY OF DANVILLE  
INSPECTION DIVISION (434) 799-5263

PERMIT TYPE: ELECTRICAL

PERMIT NO: E-10-0042

DATE ISSUED: 2/17/2010

\* LOCATION:

ADDRESS 629 CRAGHEAD  
R/E MAP NO: 2714-006-000010.000

LOT:  
R/E ACCOUNT NO: 9226618

\* OWNER/LESSEE

CITY OF DANVILLE  
427 PATTON ST  
DANVILLE VA 24541

\* CONTRACTOR

NO: 100608  
SOUTHERN ENERGY INC  
101 KITTY HAWK DR  
MORRISVILLE NC 27560  
(919)836-0330

\* ELECTRICAL EQUIPMENT

OUTLETS: 1 TO 10  
11 TO 100  
101 TO 150  
MORE THAN 150

ELECTRIC HEAT - KW  
NUMBER OF METER SOCKETS  
ADDITIONAL FEEDERS

SPECIAL OUTLETS: AIR COND/HEAT  
RANGE  
SOLAR PANELS

DRYER  
WATER HEATER

1

AMPERAGE: 100  
150  
200 1  
400  
600  
800  
OVER 300

HORSEPOWER: 1 - 5  
6 - 75  
76 - 100  
101 - 200  
OVER 200

SERVICE: NEW

COMMENTS: INSTALL NEW 200 AMP SERVICE FOR INTERACTIVE  
SOLAR PHOTOVOLTAIC SYSTEM

\* APPLICANT

CONTRACTOR  
CHAD BOTNER  
(919)836-0330

\* PERMIT FEE

VALUATION: \$200,000.00  
PERMIT FEE: \$0.00 EXEMPT

*Mr. Chavez*  
SIGNATURE OF OWNER  
OR AUTHORIZED AGENT

*John P. [Signature]*  
SIGNATURE OF INSPECTOR  
OR AUTHORIZED AGENT

*2-17-10*  
DATE

FEB 24 RECD

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, DC

OMB Control # 1902-0075

# Form 556

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

Type or print your responses below. 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 [www.ferc.gov/QF](http://www.ferc.gov/QF).

Certain lines in this form will be automatically calculated based on responses to previous lines, with the relevant formulas shown in the descriptions of the automatically calculated lines. If you disagree with the results of any automatic calculation on this form, contact Commission staff to discuss the discrepancy before filing.

Paperwork Reduction Act Notice: The Office of Management and Budget (OMB) Control No. is 1902-0075 and authorization expires on 12/31/2012. 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 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 N.E., 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.

	Full name of applicant City of Danville	
	Docket number assigned to the immediately preceding submittal filed with the Commission in connection with the instant facility, if any: QF <u>10 - 398 - 000</u> <input checked="" type="checkbox"/> Check here if no previous QF submittals for your facility	
1a	Purpose of instant filing: Under which certification process is the applicant making this filing? (check one) <input checked="" type="checkbox"/> Notice of self-certification or recertification pursuant to 18 C.F.R. § 292.207(a) <input type="checkbox"/> Application for Commission certification or recertification pursuant to 18 C.F.R. § 292.207(b) and (d)(2)	
	What type(s) of QF status is the applicant seeking for its facility? (check all that apply) <input checked="" type="checkbox"/> Qualifying small power production facility status <input type="checkbox"/> Qualifying cogeneration facility status	
	Indicate the specific purpose of the filing: (check one) <input checked="" type="checkbox"/> Original certification <input type="checkbox"/> Recertification to give notice of change(s) to a previously certified facility (specify change(s) below) <input type="checkbox"/> Name change and/or other administrative change(s) <input type="checkbox"/> Change in ownership <input type="checkbox"/> Change(s) affecting plant equipment, fuel use, power production capacity and/or cogeneration thermal output <input type="checkbox"/> Supplement or correction to a previous filing submitted on the following date: _____ (describe the supplement or correction in section 6)	
1b	Full address of applicant	
	Street Address 1040 Monument Street	
	City Danville	State/province VA
	Postal code 24541	Country (if not United States)

<b>2</b>	Person to whom communications regarding the filed information may be addressed	
	Name of contact person Ken Ashworth	
	Title Director of Power and Light	Telephone number (434) 799-5270
	<input checked="" type="checkbox"/> If the contact person's address is the same as provided above for the applicant, check here and skip to section 3a.	
	Street address	
	City	State/province
	Postal code	Country (if not United States)
<b>3a</b>	Location of facility to be certified	
	Facility name City of Danville Community Market	
	Street address (if known) 629 Craghead Street	
	City (if unincorporated, check here and enter nearest city) <input type="checkbox"/> Danville	State/province NC
	County (or check here for independent city) <input type="checkbox"/> Pittsylvania	Country (if not United States)
<b>3b</b>	Indicate the electric utilities that are contemplated to transact with the facility and describe the services those electric utilities are expected to provide the services indicated below:	
	Indicate utility interconnecting with the facility: Danville Utilities	
	Indicate utilities providing wheeling service (if known): Danville Utilities	
	Indicate utilities purchasing the useful electric power output (if known): Danville Utilities	
	Indicate utilities providing supplementary power, backup power, maintenance power, and/or interruptible power service (if known): Danville Utilities	

4d

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 in section 6)
- Renewable resources (specify)
  - Hydro power - river
  - Hydro power - tidal
  - Hydro power - wave
  - Solar - photovoltaic
  - Solar - thermal
  - Wind
  - Other renewable resource (describe in section 6)
- Geothermal
- Fossil fuel (specify)
  - Coal (not waste)
  - Fuel oil/diesel
  - Natural gas (not waste)
  - Other fossil fuel (describe in section 6)
- Waste (specify type below)
- Other (describe in section 6)

If you specified "waste" as the primary energy input, 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 in section 6)
  - Waste natural gas from gas or oil wells (describe in section 6 how the gas meets the requirements of section 2.400 of the Commission's regulations, 18 C.F.R. § 2.400, for waste natural gas; include with your filing any materials necessary to demonstrate compliance with section 2.400)
  - Materials that a government agency has certified for disposal by combustion (describe in section 6)
  - Heat from exothermic reactions (describe in section 6)
  - Residual heat (describe in section 6)
  - 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 section 6; include a discussion of the fuel's lack of commercial value and existence in the absence of the qualifying facility industry)

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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)).

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 %

## Description of the Small Power Production Facility

If you indicated in section 1a that you are seeking qualifying small power production facility status for your facility, then you must respond to sections 7 and 8. Otherwise, skip sections 7 and 8.

7	<p>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. Continue in section 6 if additional space is needed.</p> <p>No fossil fuels will be used in the facility's operation.</p>
8	<p>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 section 1c above and uses the same primary energy input, provide the following information about the other facilities for the purpose of demonstrating that the total of the power production capacities of these facilities does not exceed 80 MW.</p> <p>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.</p> <p>Continue in section 6 if additional space is needed to respond to any of the items below.</p> <p>Check here and skip the rest of section 8 if there are no eligible solar, wind, waste or geothermal facilities <input checked="" type="checkbox"/> located within one mile of the instant facility which are owned by any of the entities (or their affiliates) reported in section 1c above and which use the same primary energy input.</p> <p>Facility names, if any (as reported to the Commission)</p> <p>Commission docket numbers</p> <p>Names of common owners</p> <p>Common primary energy source used as energy input</p> <p>Power production capacities (MW)</p>

<b>10</b>	<p>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 (section 11 below), provide a mass and heat balance (cycle) diagram depicting the following average annual hourly operating conditions for the following:</p> <p>Working fluid (e.g., steam, water) flow conditions at (1) input and output of prime mover(s) and (2) at delivery to and return from each useful thermal application including the following: (1) flow rates (lbs./hr.), (2) temperature (deg. F), (3) pressure (psia), and (4) enthalpy (Btu/lb.). (Exception: Pressure values are <u>not</u> required to be specified in a flow cycle that is <u>all</u> liquid and has no vapor at any point in the cycle. Also, for cycles which are <u>all</u> liquid water, enthalpy need not be provided and a specific heat of 1.002 Btu/(lb*R) for will be assumed unless otherwise specified.)</p> <p>Indicate on the diagram the average fuel flow inputs in Btu/hr. (using lower heating value) (18 C.F.R § 292.202(m)), separately indicating fossil fuel inputs for any supplementary firing in Btu/hr. (18 C.F.R § 292.202(f)).</p>	
	Number of hours of operation used to determine the average annual hourly facility inputs and outputs	h

<b>11</b>	<p>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.</p> <p>If you indicated in section 9 that your facility represents topping-cycle cogeneration technology, compute topping-cycle operating and efficiency values by completing the worksheet below. Topping-cycle operating value is required to be 5 percent or more. Topping-cycle efficiency value is required to be 45 percent or more when operating value is less than 15 percent, or 42.5 percent or more when operating value is equal to or greater than 15 percent.</p>	
	(Pt) Average annual hourly useful thermal energy output	Btu/h
	Average annual rate of electrical output	kW
	(Pe) Convert electrical output to Btu/h by multiplying line above by 3,412	Btu/h
	Average annual rate of mechanical output	hp
	(Pm) Convert mechanical output to Btu/h by multiplying line above by 2,544	Btu/h
	(Pi) Average annual hourly energy input (natural gas or oil only)	Btu/h
	(Ps) Average annual hourly energy input from supplementary firing (natural gas or oil only)	Btu/h
	Topping-cycle operating value = $100 * Pt / (Pt + Pe + Pm)$	0 %
	Topping-cycle efficiency value = $100 * (Pe + Pm + 0.5 * Pt) / (Pi + Ps)$	0 %
	<p>If you indicated in section 9 that your facility represents bottoming-cycle cogeneration technology, compute bottoming-cycle efficiency value by completing the worksheet below. Bottoming-cycle efficiency value is required to be 45 percent or more.</p>	
	Average annual rate of electrical output	kW
	(Pe) Convert electrical output to Btu/h by multiplying line above by 3,412	Btu/h
	Average annual rate of mechanical output	hp
	(Pm) Convert mechanical output to Btu/h by multiplying line above by 2,544	Btu/h
	(Ps) Average annual hourly energy input from supplementary firing (natural gas or oil only)	Btu/h
	Bottoming-cycle efficiency value = $100 * (Pe + Pm) / Ps$	0 %

### For Bottoming-Cycle Cogeneration Facilities

If you indicated in section 9 that your facility represents bottoming-cycle cogeneration technology, then you must respond to section 14. Otherwise, skip section 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. Continue in section 6 if additional space is needed.

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## Signature

Provide your signature and signature date below. Rule 2005(a) of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2005(a)) provides that a signature on a filing constitutes a certificate that (1) the signer has read the filing and knows its contents; (2) that 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.

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 their name to sign the filed documents. A person filing this document electronically should sign (by typing their name) in the space provided below. A person filing this form in hardcopy format should sign in ink.

Signature	Date
Ken L. Ashworth	3-24-2010

## Filing Fee

No filing fee is required if you are submitting a self-certification 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 of your facility as a QF under 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) or 292.205(c).

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

See the How to File section on the following page for details on how to include your filing fee with your filing. If a filing fee is required, you must submit your fee before your application can be considered complete.

## Notice Requirements

### Draft Notice Suitable for Publication in the *Federal Register*

Pursuant to 18 C.F.R. §§ 292.207(a)(iv) and (b)(4), a notice is required to be published in the *Federal Register* alerting the public to the filing of the following types of documents: (1) application for Commission certification of a facility as a QF (small power production or cogeneration facility); or (2) self-certification of a "new" cogeneration facility.

Definition: A cogeneration facility is "new" if it was either not certified as a qualifying cogeneration facility on or before August 8, 2005, or had not filed a notice of self-certification, self-recertification or an application for Commission certification or Commission recertification as a qualifying cogeneration facility under section 292.207 of the Commission's regulations prior to February 2, 2006.

No draft *Federal Register* notice is required to be published for the self-certification of any small power production facility, or for the self-certification of any "old" cogeneration facility (*i.e.*, any cogeneration facility that does not meet the above definition of a "new" facility).

If publication of a draft *Federal Register* notice is required for your filing, you must obtain a blank notice from the Commission's website, complete the draft notice with the information pertaining to your facility, and include the draft notice with your filing in a word processing format (DOC, RTF, WPD, etc.) on electronic media (either electronically filed with your document, or on a disk, CD or DVD accompanying your filing). The Secretary of the Commission will, upon receipt of your draft notice, review the notice to ensure proper format and send it for publication in the *Federal Register*. Blank copies of *Federal Register* notices can be downloaded from the Notice Requirements link from the Commission's QF website at [www.ferc.gov/QF](http://www.ferc.gov/QF).

### Required Notice to Utilities and Public Utility Commissions for Self-Certification

Pursuant to 18 C.F.R. § 292.207(a)(ii), you must provide a copy of a self-certification to the utilities with which the facility will interconnect and transact, as well as to the Public Utility Commissions of the states in which those utilities and your facility reside. Links to information about the Public Utility Commissions in various states is available from the Notice Requirements link on the Commission's QF website at [www.ferc.gov/QF](http://www.ferc.gov/QF).