



**Case No.: 09-891-EL-REN**

**A. Name of Renewable Generating Facility:** Killen Generating Station

*The name specified will appear on the facility's certificate of eligibility issued by the Public Utilities Commission of Ohio.*

**Facility Location**

Street Address: 14869 US 52

City: Manchester State: OH Zip Code: 45144

**Facility Latitude and Longitude**

Latitude: 38 degrees 41' 29.95" N

Longitude: 83 degrees 28' 45.66" W

*There are internet mapping tools available to determine your latitude and longitude, if you do not have this information.*

*If applicable, U.S. Department of Energy, Energy Information Administration Form EIA-860 Plant Name and Plant Code.*

EIA-860 Plant Name: 6031

EIA Plant Code: Killen Station

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**B. Name of the Facility Owner**

*Please note that the facility owner name listed will be the name that appears on the certificate. The address provided in this section is where the certificate will be sent.*

*If the facility has multiple owners, please provide the following information for each on additional sheets.*

This facility is co-owned by The Dayton Power and Light Company and Duke Energy.

Applicant's Legal Name: The Dayton Power and Light Company

Representative: Gary Stephenson

Title: Senior Vice President, Generation and Marketing

Organization: The Dayton Power and Light Company

Street Address: 1065 Woodman Drive

City: Dayton State: OH Zip Code: 45432

Country: USA

Phone: 937-259-7163 Fax: 937-259-7250 Email Address: Gary.Stephenson@dplinc.com

Web Site Address (if applicable): www.dplinc.com

**C. List name, address, telephone number and web site address under which Applicant will do business in Ohio.**

Applicant's Legal Name (First Name, MI, Last Name): The Dayton Power and Light Company

Representative: Gary Stephenson

Title: Senior Vice-President, Generation and Marketing

Organization:

The Dayton Power and Light Company

Street Address: 1065 Woodman Drive

City: Dayton State: Ohio Zip Code: 45432

Country: USA

Phone: 937-259-7163 Fax: 937-259-7250 Email Address:

Gary.Stephenson@dplinc.com

Web Site Address (if applicable): www.dplinc.com

**D. Name of Generation Facility Operating Company:** The Dayton Power and Light Company

Legal Name of Contact Person: Mike Harrell

Title: Manager, Killen Generating Station

Organization: The Dayton Power and Light Company

Street Address: 14869 US 52

City: Manchester State: OH Zip Code: 45144

Country: USA

Phone: 937-549-3911 Fax: Email Address: Michael.Harrell@dplinc.com

Web Site Address (if applicable): www.dplinc.com

**E. Contact person for regulatory or emergency matters:**

Legal Name of Contact Person: Nathan Parke

Title: Supervisor, Regulatory Operations

Organization: The Dayton Power and Light Company

Street Address: 1065 Woodman Drive

City: Dayton State: OH Zip Code: 45432

Country: USA

Phone: 937-259-7904 Fax: Email Address: Nathan.Parke@dplinc.com

Web Site Address (if applicable): www.dplinc.com

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## **F. Certification Criteria 1: Deliverability of the Generation into Ohio**

Ohio Revised Code (ORC) Sec. 4928.64(B)(3)

*The facility must have an interconnection with an electric utility.*

Check which of the following applies to your facility's location:

☒ The facility is located in Ohio.

☐ The facility is located in a state geographically contiguous to Ohio (Indiana, Kentucky, Michigan, Pennsylvania, or West Virginia).

☐ The facility is located in the following state:

*If the renewable energy resource generation facility is not located in Ohio, Indiana, Kentucky, Michigan, Pennsylvania, or West Virginia, you are required to submit a study by one of the regional transmission organizations (RTO) operating in Ohio, either PJM or Midwest ISO, demonstrating that the power from your facility is physically deliverable into the state of Ohio. The study may be conducted by someone other than the RTO provided that the RTO approves the study. This study must be appended to your application as an exhibit.*

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## **G. Certification Criteria 2: Qualified Resource or Technology**

*You should provide information for only one resource or technology on this application; please check and/or fill out only one of the sections below. If you are applying for more than one resource or technology, you will need to complete a separate application for each resource or technology.*

G.1. For the resource or technology you identify in Sections G.4 – G.13 below, please provide a written description of the system.

The Killen Generation Station located at 14869 US 52, Manchester, OH 45144, is a base load coal fired generating station that is commonly owned with Duke Energy.

On August 27, 2009, The Dayton Power and Light Company received a temporary permit to install exemption letter from the Ohio Environmental Protection Agency to test burn wood cellulose pellets at the Killen Generating Station for a maximum of 30 days between September 14, 2009 and December 14, 2009.

It is the intent of The Dayton Power and Light Company to burn up to 10% wood cellulose pellets (on a heat input basis) after this test period and upon approval by the Ohio Environmental Protection Agency.

G.2. Please include a detailed description of how the output of the facility is going to be measured and verified, including the configuration of the meter(s) and the meter type(s).

The output of this facility will be measured and verified using the metering infrastructure that is currently in service. Supplemental meter information is provided in Section N.

G.3. Please attach digital photographs that depict an accurate characterization of the renewable generating facility. Please indicate the date(s) the photographs were taken. For existing facilities, these photographs must be submitted for your application to be reviewed. For proposed facilities or those under construction, photographs will be required to be filed within 30 days of the on-line date of the facility.

**Photograph taken on August 21, 2007**



**The Applicant is applying for certification in Ohio based on the following qualified resource or technology (Sec. 4928.01 O.R.C.):**

#### **G.4 ☐ SOLAR PHOTOVOLTAIC**

Total PV Capacity (DC):

Total PV Capacity (AC):

Expected Capacity Factor:

*Capacity factor is the ratio of the energy produced to the maximum possible at full power, over a given time period. Capacity factor may be calculated using this formula:*

*Projected annual generation (kWh or MWh) **divided by** [the nameplate capacity (in kW or MW) **times** 8760]*

Anticipated Annual output in kWh/yr:

Location of the PV array: ☐ Roof ☐ Ground ☐ Other

# of Modules and/or size of the array:

#### **G.4a PV Modules**

For each PV module, provide the following information:

Manufacturer:

Model and Rating:

#### **G.5 ☐ SOLAR THERMAL (FOR ELECTRIC GENERATION)**

#### **G.6 ☐ WIND**

Total Nameplate Capacity (kilowatts AC): \_\_\_\_\_ or kW DC:

Expected Capacity Factor:

Anticipated Annual Output in kWh/yr or MWh/yr:

# of Generators:

#### **G.6a Wind Generators**

*If your system includes multiple generators, please provide the following information for each unique generator you have in your system*

Manufacturer:

Model Name and Number:

Generator Nameplate Capacity (kilowatts AC):

Wind Hub Height (ft):

Wind Rotor Diameter (ft):

**G.7 ☐ HYDROELECTRIC** ("hydroelectric facility" means a hydroelectric generating facility that is located at a dam on a river, or on any water discharged to a river, that is within or bordering this state or within or bordering an adjoining state (Sec. 4928.01(35) O.R.C.)

Check each of the following to verify that your facility meets each of the statutory standards (Sec. 4928.01(35) O.R.C.):

- (a) The facility provides for river flows that are not detrimental for fish, wildlife, and water quality, including seasonal flow fluctuations as defined by the applicable licensing agency for the facility.
- (b) The facility demonstrates that it complies with the water quality standards of this state, which compliance may consist of certification under Section 401 of the "Clean Water Act of 1977," 91 Stat. 1598, 1599, 33 U.S.C. 1341, and demonstrates that it has not contributed to a finding by this state that the river has impaired water quality under Section 303(d) of the "Clean Water Act of 1977," 114 Stat. 870, 33 U.S.C. 1313.
- (c) The facility complies with mandatory prescriptions regarding fish passage as required by the Federal Energy Regulatory Commission license issued for the project, regarding fish protection for riverine, anadromous, and catadromus fish.
- (d) The facility complies with the recommendations of the Ohio Environmental Protection Agency and with the terms of its Federal Energy Regulatory Commission license regarding watershed protection, mitigation, or enhancement, to the extent of each agency's respective jurisdiction over the facility.
- (e) The facility complies with provisions of the "Endangered Species Act of 1973," 87 Stat. 884, 16 U.S.C. 1531 to 1544, as amended.
- (f) The facility does not harm cultural resources of the area. This can be shown through compliance with the terms of its Federal Energy Regulatory Commission license or, if the facility is not regulated by that commission, through development of a plan approved by the Ohio Historic Preservation Office, to the extent it has jurisdiction over the facility.
- (g) The facility complies with the terms of its Federal Energy Regulatory Commission license or exemption that are related to recreational access, accommodation, and facilities or, if the facility is not regulated by that commission, the facility complies with similar requirements as are recommended by resource agencies, to the extent they have jurisdiction over the facility; and the facility provides access to water to the public without fee or charge.
- (h) The facility is not recommended for removal by any federal agency or agency of any state, to the extent the particular agency has jurisdiction over the facility.

## **G.8 \_\_ GEOTHERMAL**

**G.9\_\_ SOLID WASTE** (as defined in ORC section 3734.01), electricity generation using fuel derived from solid wastes through fractionation, biological decomposition, or other process that does not principally involve combustion. (Sec. 4928.01(A)(35) O.R.C.)

Identify all fuel types used by the facility and respective proportions (show by the percent of heat input):

**G.10 X BIOMASS** (includes biologically-derived methane gas, such as landfill gas)

Identify the fuel type used by the facility: Wood Cellulose Pellets

*If co-firing an electric generating facility with a biomass energy resource, the proportion of fuel input attributable to the biomass energy resource shall dictate the proportion of electricity output from the facility that can be considered biomass energy.*

**G.10a** List all fuel types used by the facility and respective proportions (show by the percent of heat input):

- Wood Cellulose Pellets will consist of up to 10% of heat input.
- Coal will comprise of 90% to 100% of heat input.
- Start-up and flame stabilization fuel: will comprise of 80%-100% #2 fuel oil
- Start-up and flame stabilization fuel: will comprise of up to 20% biodiesel
- Based upon historical analysis, the #2 fuel oil has comprised of approx 0.52% of the total heat input

**G.10b** Please attach the formula for computing the proportions of output per fuel type by MWh or kWh generated.

The proportion of energy input, measured in BTUs, comprised of wood cellulose pellets shall dictate the proportion of electricity output, measured in MWhs, from the facility that is considered from a renewable resource.

Calculation:

$$[(EI_{Ren}) / (EI_T)] \times MWH_{Total} = MWH_{Ren}$$

Where:

$EI_{Ren}$  = Energy Input comprised of wood cellulose pellets

$EI_T$  = Total Energy Input

$MWH_{Total}$  = Total Megawatt hours of generation from the facility

$MWH_{Ren}$  = Megawatt hours of generation attributed to a renewable source

**G.11    FUEL CELL** (any fuel cell used in the generation of electricity, including, but not limited to, a proton exchange membrane fuel cell, phosphoric acid fuel cell, molten carbonate fuel cell, or solid oxide fuel cell; Sec. 4928.01(35)(A) O.R.C.).

Identify all fuel types used by the facility and respective proportions:

## **G.12 \_\_ STORAGE FACILITY**

If using compressed air or pumped hydropower, the renewable energy resource used to impel the resource into the storage reservoir is (include resource type and facility name):

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## **H. Certification Criteria 3: Placed in Service Date (Sec. 4928.64. (A)(1) O.R.C.)**

The Renewable Energy Facility:

\_\_ has a placed-in-service date before January 1, 1998; (month/day/year):

\_\_ has a placed-in-service date on or after January 1, 1998; (month/day/year):

**X** has been modified or retrofitted on or after January 1, 1998; (month/day/year): 9/30/2009

Please provide a detailed description of the modifications or retrofits made to the facility that rendered it eligible for consideration as a qualified renewable energy resource. In your description, please include the date of initial operation and the date of modification or retrofit to use a qualified renewable resource. Please include this description as an exhibit attached to your application filing and identify the subject matter in the heading of the exhibit.

The initial placed in service date for the Killen Generating Station is June 30, 1982. On August 27, 2009, The Dayton Power and Light Company received a temporary permit to install exemption letter from the Ohio Environmental Protection Agency to test burn wood cellulose pellets at the Killen Generating Station for a maximum of 30 days between September 14, 2009 and December 14, 2009.

It is the intent of The Dayton Power and Light Company to modify the fuel type of the Killen Generating Station and burn up to 10% wood cellulose pellets after this test period and upon approval by the Ohio Environmental Protection Agency.

DP&L purchases the wood cellulose pellets for delivery at a particular dock along the Ohio River. The wood cellulose pellets are then blended with coal as the barge is being loaded for transport to the plant. DP&L is charged an additional fee to have the biofuel blended with coal. The biofuel/coal fuel blend is conveyed to the plant's boiler via the existing fuel handling system.



The results of the test burns will be used to assess if any further modifications are needed in order to be able to co-fire bio-fuels on a consistent basis.

☐ Not yet online; projected in-service date (month/day/year):

**H.1** Is the renewable energy facility owner a mercantile customer?

ORC Sec. 4928.01 (19) "Mercantile customer" means a commercial or industrial customer if the electricity consumed is for nonresidential use and the customer consumes more than seven hundred thousand kilowatt hours per year or is part of a national account involving multiple facilities in one or more states.

☒ No

☐ Yes

Has the mercantile customer facility owner committed to integrate the resource under the provisions of Rule 4901:1-39-08 O.A.C?

☐ No

☐ Yes

If yes, please attach a copy of your approved application as an exhibit to this filing.

## **I. Facility Information**

The nameplate capacity of the entire facility in megawatts (MW): 600 MW

If applicable, what is the expected heat rate of resource used per kWh of net generation:  
Approx. 10,700 BTU/kWh

Number of Generating Units: 1

**I.1** For each generating unit, provide the following information:

In-Service date of each unit	The nameplate capacity of each unit in megawatts (MW)	Projected Annual Generation (GWh)	Expected Annual Capacity Factor %
6/30/1982	600	Approx. 3,784	Approx 72%


*(To expand the number of rows if more units need to be reported, place your cursor in the bottom right cell and hit tab).*

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## J. Regional Transmission Organization Information

**J.1** In which Regional Transmission Organization area is your facility located:

☒ Within Geographic Area of PJM Interconnection, L.L.C.

☐ Within Geographic Area of Midwest ISO

☐ Other (specify):

**J.2** Are you a member of a regional transmission organization?

☒ Yes; specify which one: PJM

☐ No; explain why you are not a member of a regional transmission organization:

**J.3** Balancing Authority operator or control area operator for the facility:

☒ PJM

☐ Midwest ISO

☐ Other (specify):

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## K. Attribute Tracking System Information

Are you currently registered with an attribute tracking system: ☒ Yes ☐ No

In which attribute tracking system are you currently registered or in which do you intend to register (*the tracking system you identify will be the system the PUCO contacts with your eligibility certification*):

☒ GATS (Generation Attribute Tracking System)

☐ M-RETS (Midwest Renewable Energy Tracking System)

☐ Other (specify):

**K.1** Enter the generation ID number you have been assigned by the tracking system:

MSET87030101

*If the generation ID number has not yet been assigned, you will need to provide this number to the PUCO within 15 days of your facility receiving this number from the tracking system).*

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**L. Other State Certification**

Is the facility certified by another state as an eligible generating resource to meet the renewable portfolio standards of that state?

☐ Yes

☒ No

**L.1** If yes, for each state, provide the following information:

Name of State	State Certification Agency	State Certification Number	Date Issued

*(To expand the number of rows if more units need to be reported, place your cursor in the bottom right cell and hit tab).*

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**M. Type of Generating Facility**

Please check all of the following that apply to your facility:

☒ Utility Generating Facility:

☒ Investor Owned Utility

☐ Rural Electric Cooperative

☐ Municipal System

☐ Electric Services Company (competitive retail electric service provider certified by the PUCO)

☐ Distributed Generation with a net metering and interconnection agreement with a utility.  
Identify the utility:

☐ Distributed Generation with both on-site use and wholesale sales.  
Identify the utility with which the facility is interconnected:

☐ Distributed Generation, interconnected without net metering.  
Identify the utility with which the facility is interconnected:

Note: if the facility does not yet have an interconnection agreement with a utility or transmission system operator, please note here the status of the application for such an agreement:

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## N. Meter Specifications

*All facilities are required to measure output with a utility grade meter. Please provide this information for each meter used in your system.*

Manufacturer: Scientific Columbus

Serial Number: 4747

Type: Jem 202 P

Date of Last Certification: 9/22/2009

Attach a photograph of the meter with date image taken. The meter reading must be clearly visible in the photograph.

Report the total meter reading number at the time of the photograph and specify the appropriate unit of generation (e.g., kWh): 879,723,000

### INSERT PHOTOGRAPH(S)

**Photograph taken on 9/24/09**



*The Public Utilities Commission of Ohio reserves the right to verify the accuracy of the data reported to the tracking system and to the PUCO.*

Version: October 08, 2009

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**10/29/2009 10:45:44 AM**

**in**

**Case No(s). 09-0891-EL-REN**

Summary: Amended Application for Renewable Certification of the Killen Station electronically filed by Mr. Robert J Adams on behalf of The Dayton Power and Light Company