



**Case No.: 09-1023-EL-REN**

**A. Name of Renewable Generating Facility: Walter C. Beckjord 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: **757 U.S. Route 52**

City: **New Richmond** State: **OH** Zip Code: **45157**

**Facility Latitude and Longitude**

Latitude: **38 degrees, 59.3 minutes North** Longitude: **84 degrees, 17.5 minutes West**

*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: **Walter C Beckjord**

EIA Plant Code: **2830**

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**B. Name of the Facility Owner:**

**Unit 1 – 100 % Duke Energy Ohio, Inc.**

**Unit 2 – 100 % Duke Energy Ohio, Inc.**

**Unit 3 – 100 % Duke Energy Ohio, Inc.**

**Unit 4 – 100 % Duke Energy Ohio, Inc.**

**Unit 5 – 100 % Duke Energy Ohio, Inc.**

**Unit 6 – 37.5 % Duke Energy Ohio, Inc., 50 % Dayton Power & Light Company and 12.5 % American Electric Power Inc.**

*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.*

Applicant's Legal Name (First Name, MI, Last Name): **Michael L. Hofmann**

Title: **V.P. Generation Operations Non-regulated**

Organization: **Midwest Generation Portfolio**

Street Address: 139 E. 4<sup>th</sup> St.

City: Cincinnati State: OH Zip Code: 45202

Country: U.S.

Phone: 513-419-5807 Fax: 513-419-6955

Email Address: [mike.hofmann@duke-energy.com](mailto:mike.hofmann@duke-energy.com)

Web Site Address (if applicable): <http://www.duke-energy.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): **Same as "B".**

Title:

Organization:

Street Address:

City:                      State:                      Zip Code:

Country:

Phone:                      Fax:                      Email Address:

Web Site Address (if applicable):

**D. Name of Generation Facility Operating Company: **Duke Energy Ohio, Inc.****

Legal Name of Contact Person (First Name, MI, Last Name): **Jim W. Cumbow**

Title: **Station Manager**

Organization: **Non-regulated Generation**

Street Address: **757 U.S. Route 52**

City: **New Richmond**      State: **OH**      Zip Code: **45157**

Country: **United States**

Phone: **513-467-5020**      Fax: **513-467-5149**      Email Address: **jim.cumbow@duke-energy.com**

Web Site Address (if applicable):

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

Legal Name of Contact Person (First Name, MI, Last Name): **Michael L. Hofmann**

Title: **V.P. Generation Operations Non-regulated**

Organization: **Midwest Generation Portfolio**

Street Address: **139 E. 4<sup>th</sup> St.**

City: **Cincinnati**      State: **OH**      Zip Code: **45202**

Country: **U.S.**

Phone: **513-419-5807**      Fax: **513-419-6955**

Email Address: **mike.hofmann@duke-energy.com**

Web Site Address (if applicable):

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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

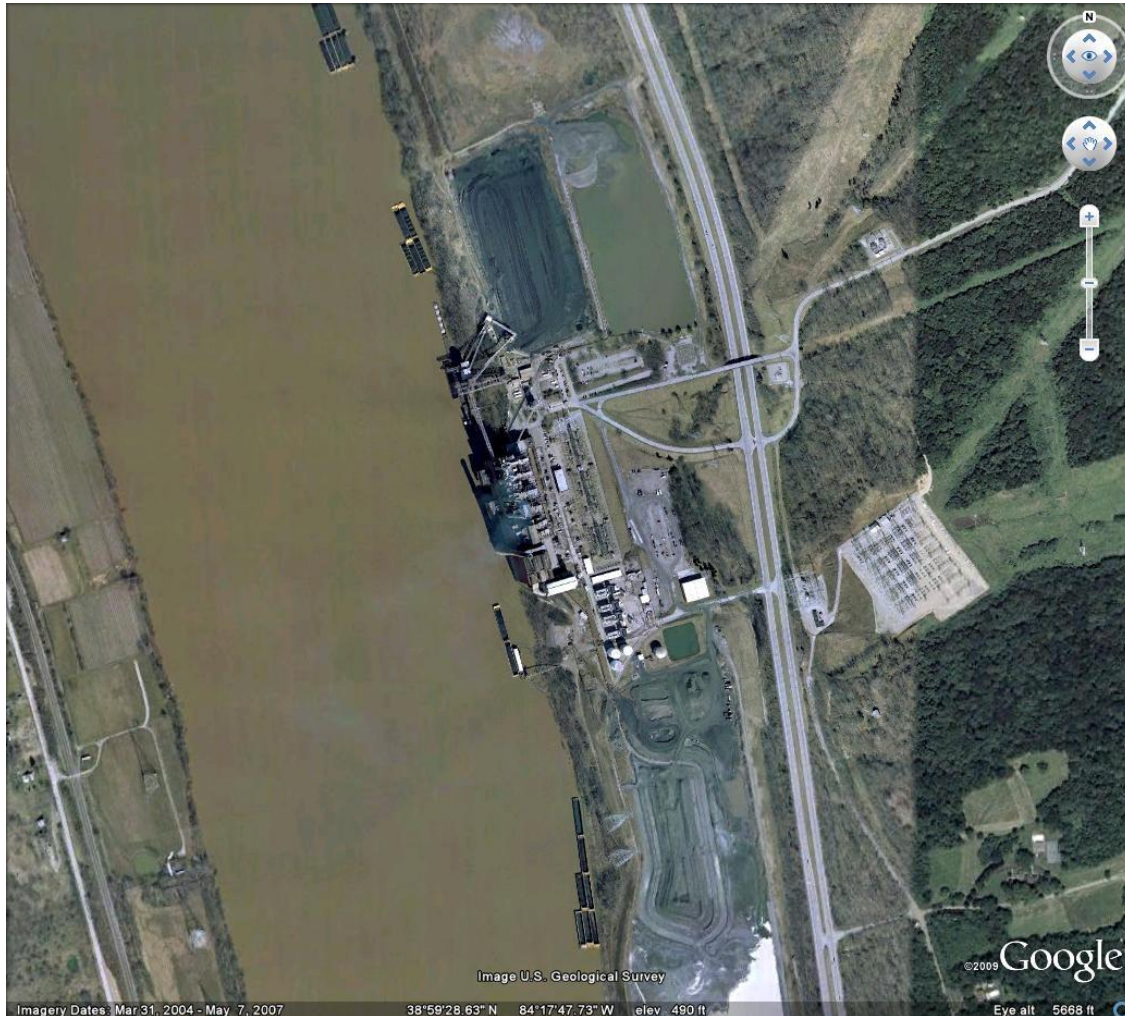
*You should provide information for only one resource or technology on this application; please check and/or fill out only one of the sections below. If you are applying for more than one resource or technology, you will need to complete a separate application for each resource or technology.*

G.1. For the resource or technology you identify in Sections G.4 – G.13 below, please provide a written description of the system. **Biomass materials including but not limited to raw wood chips, herbaceous crops, wood pellets and agricultural waste will be co-fired with coal in proportions of 1 % up to 100 % of total heat supplied.**

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 in place as shown 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.

**INSERT PHOTOGRAPH(S)**



**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 kW or MW) times (8760 hours—annual)*

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: **Solid biomass.**

*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): **Biomass materials including but not limited to raw wood chips, herbaceous crops, wood pellets and agricultural waste will be co-fired with coal in proportions of 1 % up to 100 % of total heat supplied.**

**G.10b** Please attach the formula for computing the proportions of output per fuel type by MWh or kWh generated. **Output in MWh will be calculated based upon the pro rata portion of heat supplied by biomass according to the general equations in attachment 1.**

**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):

☐ has been modified or retrofitted on or after January 1, 1998; (month/day/year):

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.

☒ Not yet online; projected in-service date (month/day/year): 6/30/2013

For higher proportions of biomass co-firing, modifications will be needed to material handling, storage and energy conversion systems. Exact facility modifications are yet to be determined and will be based upon test burns beginning in 2010.

**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.

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**I. Facility Information**

The nameplate capacity of the entire facility in megawatts (MW): **1,125**

If applicable, what is the expected heat rate of resource used per kWh of net generation:  
**Approximately 11,000 BTU/kWh**

Number of Generating Units: **6**

**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	Expected Annual Capacity Factor %
<b>June, 1952</b>	<b>94</b>	<b>411,720</b>	<b>50</b>
<b>October, 1953</b>	<b>94</b>	<b>411,720</b>	<b>50</b>
<b>November, 1954</b>	<b>128</b>	<b>672,768</b>	<b>60</b>
<b>July, 1958</b>	<b>150</b>	<b>919,800</b>	<b>70</b>
<b>December, 1962</b>	<b>238</b>	<b>1,563,660</b>	<b>75</b>
<b>July, 1969</b>	<b>421</b>	<b>2,765,970</b>	<b>75</b>

*(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: **MISO & 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: **GATS generator ID is MSET87140106, M-RETS generator ID not yet available.**

*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.*

Please see attachment 2 for meter specifications by unit.

Manufacturer:

Serial Number:

Type:

Date of Last Certification:

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):

**INSERT PHOTOGRAPH(S)**

*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.*

## Attachment 1 – Formula for Calculation of Renewable Energy

Formula to calculate renewable generation from biomass:

$$MWh_{REC} = \left( \frac{m_b * HHV_b}{m_b * HHV_b + m_c * HHV_c} \right) * MWh_{NET,MEASURED}$$

Where:

$MWh_{REC}$  = Renewable energy produced

$m_b$  = measured mass of biofuel consumed

$m_c$  = measured mass of coal consumed

$HHV_b$  = biofuel heating value

$HHV_c$  = coal heating value

$MWh_{NET,MEASURED}$  = measured net megawatt-hours

Example calculation:

If Beckjord unit 1 were to produce 2,000 MWh of total generation in a single day, and it consumed 68 tons of biomass with a heat content of 8,000 BTU/lb, and 882 tons of coal with a heat content of 11,750 BTU/lb, the renewable energy produced would be:

$$MWh_{REC} = \left( \frac{68 * 8,000}{68 * 8,000 + 882 * 11,750} \right) * 2,000 = 99$$

## Attachment 2 – Meter Specifications

### Unit 1 Meter:

Manufacturer: Schlumberger

Serial Number: 19756785

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/11/2008



Date Of Picture: 10/8/09

Total Meter Reading Number at time of Photo: 84016 MWh



## Unit 2 Meter:

Manufacturer: Schlumberger

Serial Number: 19756790

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/11/2008



Date Of Picture: 10/8/09

Total Meter Reading Number at time of Photo: 95542 MWh

### Unit 3 Meter:

Manufacturer: Schlumberger

Serial Number: 19756789

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/12/2008



Date Of Picture: 10/8/09

Total Meter Reading Number at time of Photo: 47279 MWh

## Unit 4 Meter:

Manufacturer: Schlumberger

Serial Number: 19756787

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/10/2008



Date Of Picture: 10/12/09

Total Meter Reading Number at time of Photo: 26848 MWh

## Unit 5 Meter:

Manufacturer: Schlumberger

Serial Number: 19756788

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/8/2008



Date Of Picture: 10/12/09

Total Meter Reading Number at time of Photo: 47758 MWh



## Unit 6 Meter:

Manufacturer: Schlumberger

Serial Number: 22615092

Type: Multi Function Polyphase Meter (Sangamo ST-Q220)

Date of Last Certification: 9/12/2008



Date Of Picture: 10/12/09

Total Meter Reading Number at time of Photo: 90742 MWh

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

**Commission of Ohio Docketing Information System on**

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**in**

**Case No(s). 09-1023-EL-REN**

Summary: Application for certification electronically filed by Ms. Katie A Kiefer on behalf of Duke Energy