



Case Number: 16-0783-EL-REN

A. Generating Facility

Name of Renewable Generating Facility: North Lake Energy, LLC - Unit 17

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

Facility Location

Street Address: 3210 Watling St., MC 2-991

City: East Chicago **State:** IN **County:** Lake **Zip Code:** 46321

Facility Latitude and Longitude

Latitude: 41.684400 **Longitude:** -87.421400

There are internet mapping tools available to determine the 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: Indiana Harbor E 5 AC Station

EIA Plant Code: 54995

B. Legal 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.

Legal Name of the Facility Owner: North Lake Energy, LLC

Legal Name of Facility Owner Representative: Katie Vertenten

Title: Director of Finance

Organization: Primary Energy

Street Address: 2215 S. York Road, Suite 202

City: Oak Brook **State:** IL **Zip Code:** 60523

Phone: 630-230-1311 **Fax:**

Email Address: kvertenten@primaryenergy.com

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

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

Legal Name of Facility Owner Representative: North Lake Energy, LLC

Title: Director of Finance

Organization: Primary Energy

Street Address: 2215 S. York Road, Suite 202

City: Oak Brook **State:** IL **Zip Code:** 60523

Phone: 630-230-1311 **Fax:**

Email Address: kvertenten@primaryenergy.com

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

D. Name of Generation Facility Operating Company

Name of Generation Facility Operating Company: North Lake Energy, LLC

Legal Name of Contact Person: James Richardson

Title: General Manager

Organization: North Lake Energy, LLC

Street Address: 3210 Watling St., MC 2-991

City: East Chicago **State:** IN **Zip Code:** 46312

Phone: 2193973970 **Fax:**

Email Address: jrichardson@primaryenergy.com

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

E. Regulatory/Emergency Contact

Legal Name of Contact Person: Luke Ford

Title: Environmental Manager

Organization: Primary Energy

Street Address: 3210 Watling Street, MC 2-991

City: East Chicago **State:** IN **Zip Code:** 46312

Phone: 2193974626 **Fax:**

Email Address: lford@primaryenergy.com

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

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 the facility's location:

No The facility is located in Ohio.

Yes The facility is located in a state geographically contiguous to Ohio (IN, KY, MI, PA, WV).

No 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 POWER FLOW study by one of the regional transmission organizations (RTO) operating in Ohio, either PJM or Midwest ISO, demonstrating that the power from the facility is physically deliverable into the state of Ohio. This study must be appended to the application as an exhibit. THE FACILITY MUST BE INTERCONNECTED TO TRANSMISSION LINES. FOR ADDITIONAL INFORMATION ON DELIVERABILITY REQUIREMENTS, PLEASE REFER TO THE COMMISSION FINDING & ORDER of 3/23/11 IN CASE NO. 09-555-EL-REN.)

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 North Lake Energy, LLC Facility is located in ArcelorMittal Steel's Indiana Harbor Works East Mill in East Chicago, Indiana. Excess blast furnace gas (BFG) from the largest mill blast furnace, BF #7 must be combusted as part of the steel making process. Without boilers, the BFG would need to be combusted in an atmospheric flare. Instead of flaring and wasting all the heat, the combustion takes place in boilers and the waste heat is captured and converted to steam. Steam produced by the boilers is then utilized by the North Lake Siemens VAX condensing steam turbine generator (STG) to produce electricity which is delivered back to the host steel mill. The mill, in turn can put excess generation onto the grid.

The North Lake facility consists of a 90 megawatt condensing steam turbine generator, a cooling tower and associated equipment. The facility's purpose is to recycle waste heat from the steel making process, through combustion in boilers, to generate steam and then utilizing this steam to produce clean electricity.

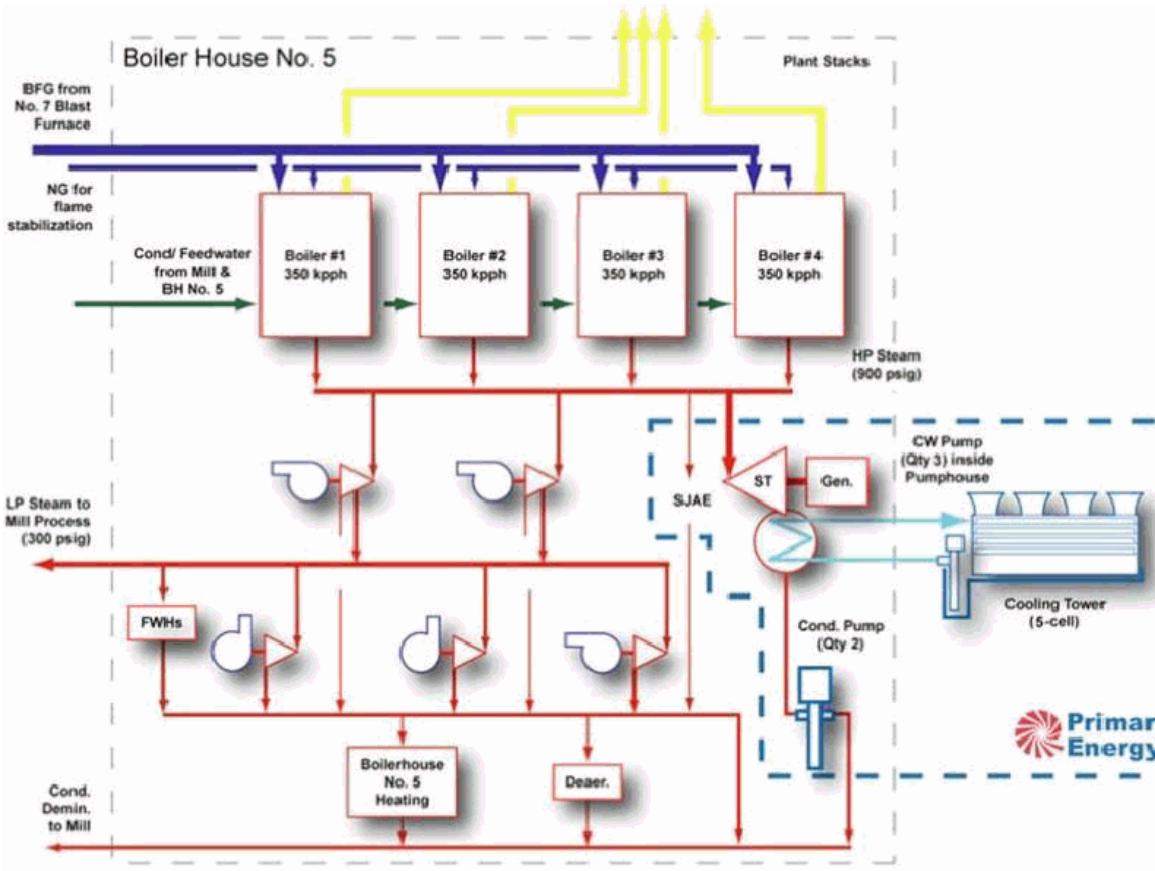
G.2. Please include a detailed description of how the output of the facility is going to be measured and verified, including the configuration of the meter(s) and the meter type(s).

The output is measured on a Jemstar JS-09R6110-56; 4 wire wye using digital signal processing. The meter is installed on the low side of the main transformer. The output is verified through continuous monitoring using the plant data historian and verified with monthly manual readings.

G.3. Please submit 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.



September 01, 2013



G.15 WASTE ENERGY RECOVERY SYSTEM

To be eligible, a waste energy recovery system **cannot be, or have been, included in an electric distribution utility's energy efficiency program on or after January 1, 2012.**

A facility that generates electricity through the conversion of energy from either of the following (check one):

☒ Exhaust heat from engines or manufacturing, industrial, commercial, or institutional sites, except for exhaust heat from a facility whose primary purpose is the generation of electricity. The waste energy recovery system must be placed into service or retrofitted on or after September 10, 2012;

☐ Reduction of pressure in gas pipelines before gas is distributed through the pipeline, provided that the conversion of energy to electricity is achieved without using additional fossil fuels. The waste energy recovery system must be placed into service or retrofitted on or after September 10, 2012.

☐ A facility at a state institution of higher education as defined in section 3345.011 of the Revised Code that recovers waste heat from electricity-producing engines or combustion turbines and that simultaneously uses the recovered heat to produce steam, provided that the facility was placed into service between January 1, 2002, and December 31, 2004.

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

The Renewable Energy Facility:

No has a placed-in-service date before January 1, 1998; Date:

No has a placed-in-service date on or after January 1, 1998; Date:

Yes has been modified or retrofitted on or after January 1, 1998; Date: 10/12/12

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 North Lake facility was initially placed into service in May 1996 with a nameplate generation capacity of 75 MW at 550,000lb/hr steam supply. At that time, the host steel mill had three boilers in operation. In 2009, the Department of Energy awarded the host steel mill a grant as part of the manufacturing energy efficiency program within the agency which was used to install an additional boiler at the site. This incremental boiler helped to capture and combust additional blast furnace gas that was previously flared to the atmosphere. With the addition of this boiler capturing the waste heat, extra steam was made available to the North Lake facility. Thus, in 2011, the North Lake facility began a retrofit process to increase the nameplate capacity of the facility to 90 MW at 680,000 lb/hr of steam. This modification was completed in October 2012.

No Not yet online; projected in-service date:

H.1 Is the renewable energy facility owner a mercantile customer? No

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.

Has the mercantile customer facility owner committed to integrate the resource under the provisions of Rule 4901:1-39-08 O.A.C? No

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

I. Facility Information

I.a The nameplate capacity of the entire facility kilowatts (kW): 90,000.00 (megawatts (MW): 90)

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

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

<u>Unit In-Service</u> <u>Date</u>	<u>Unit Nameplate</u> <u>Capacity (MW)</u>	<u>Projected Gross</u> <u>Annual Generation</u>	<u>Expected Annual</u> <u>Capacity Factor %</u>	<u>Number of</u> <u>Generating Units</u>
10/12/12	90	700,800	88.9	1

$$\text{Capacity Factor \%} = \frac{\text{Projected Annual Generation}}{\text{Nameplate Capacity} \times 8,760} \times 100$$

J. Regional Transmission Organization Information

In which Regional Transmission Organization area is your facility located:

No Within Geographic Area of PJM Interconnection, L.L.C.

Yes Within Geographic Area of Midwest ISO

No Other (specify):

K. Attribute Tracking System Information

Are you currently registered with an attribute tracking system: Yes

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*):

Yes GATS (Generation Attribute Tracking System)

No M-RETS (Midwest Renewable Energy Tracking System)

Other (specify):

K.1 Enter the generation ID number you have been assigned by the tracking system: NON87768

(If the generation ID number has not yet been assigned, you will need to file this number in the PUCO Case Docket within 15 days of the facility receiving this number from the tracking system).

K.2 Has any of the generation of the facility been tracked as RECS that have been sold or otherwise consumed? No

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

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

<u>Name of State</u>	<u>State Certification Agency</u>	<u>State Certification Number</u>	<u>Certification Date Issued</u>
Illinois	Illinois Power Authority	IL-67456-WH-I	10/05/2015

M. Type of Generating Facility

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

No Utility Generating Facility:

No Investor Owned Utility

No Rural Electric Cooperative

No Municipal System

No Electric Services Company (competitive retail electric service provider certified by the PUCO)

No Distributed Generation with a net metering and interconnection agreement with a utility.
Identify the Utility:

Yes Distributed Generation with both on-site use and wholesale sales.
Identify the Utility: NIPSCO

No Distributed Generation, interconnected without net metering.
Identify the Utility:

N. Meter Specifications

Metering Requirements

- 1. If the renewable energy resource generating facility is 6 kW or below, the output may be measured with either an inverter meter or a utility grade meter.***
- 2. All facilities that are larger than 6 kW must measure the output of the facility with a utility grade meter. Facilities that are larger than 6 kW and that are not measuring output with a utility grade meter will not be certified. OAC 4901:1-40-04 (D)(1)***
- 3. Please only report on the meter or the meters used to measure the output from the facility which will be reported to the attribute tracking system.***

N.a The meter(s) that are measuring output from the facility are:

No Inverter Meter(s)

Yes Utility Grade Meter(s) (Must meet ANSI 12.1, or demonstrate an accuracy level of $\pm 2\%$)

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Jemstar

N.1.b Serial Number: 064407617

N.1.c Type: JS-09R6110-56

N.1.d Date of Last Certification: September 24, 2014

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

N.1.e Report the total meter reading number at the time the photograph was taken and specify the appropriate unit of generation (e.g., kWh): 39104.305

2/16/2015 12:00:00AM





Public Utilities Commission

Affidavit for Application for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility

Please be advised that all applicant's contact information, including address and telephone number, will be made public and is not subject to confidential treatment. Additionally, any information pertaining to trade secrets contained within the application will be made public unless filed under seal with a motion for protective order, pursuant to Rule 4901-1-24 of the Ohio Administrative Code.

Case Number: 16-0783-EL-REN

Facility Address: 3210 Watling St., MC 2-991
East Chicago, IN 46321

Name of person making this affidavit: Katie Vertenten

State of Illinois

County of DuPage

The undersigned, being duly sworn according to law, deposes and says that:

1. I am authorized to and do hereby make this affidavit on behalf of the Applicant,
2. All facts and statements made in the application for certification, including all attachments and supplemental information or filings, are true and complete to the best of my knowledge, information, and belief,
3. The facility has obtained or will obtain and will maintain all required local, state, and federal environmental permits,
4. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

[Signature], Director of Finance
Signature of Affiant & Title

Sworn and subscribed before me this 20 day of April, 2016 Month/Year

[Signature] 4/20/16
Notary

My commission expires on 12/13/2016



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: June 3, 2013

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 16-0783-EL-REN

Summary: Application To Securitize Application for Certification as an
Eligible Ohio Renewable Energy Resource
Generating Facility electronically filed by Mrs. Katie A Vertenten on behalf of North Lake
Energy LLC