



Case Number: 14-0078-EL-REN

A. Generating Facility

Name of Renewable Generating Facility: Akron Biosolids to Energy Project Phase II

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

Facility Location

Street Address: 2677 Riverview Rd.

City: Akron **State:** OH **County:** Summit **Zip Code:** 44313

Facility Latitude and Longitude

Latitude: 41 N 9' 11.55" **Longitude:** 81 W 34' 7.92"

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: Akron Water Reclamation Facility

EIA Plant Code: have filed with DOE to obtain

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: City of Akron, Ohio

Legal Name of Facility Owner Representative: John O Moore

Title: Director of Public Service

Organization: City of Akron, OH Department of Public Service

Street Address: 166 S. High St.

City: Akron **State:** OH **Zip Code:** 44308

Phone: 330-375-2270 **Fax:** 330-375-2100

Email Address: mooreJO@akronohio.gov

Web Site Address (if applicable): www.ci.akron.oh.us

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: John O Moore

Title: Director of Public Service

Organization: City of Akron, Ohio

Street Address: 166 S. High St.

City: Akron **State:** OH **Zip Code:** 44308

Phone: 330-375-2270 **Fax:** 330-375-2100

Email Address: MooreJO@akronohio.gov

Web Site Address (if applicable): www.ci.akron.oh.us

D. Name of Generation Facility Operating Company

Name of Generation Facility Operating Company: City of Akron, Ohio

Legal Name of Contact Person: Thomas F. Smith

Title: Senior Plant Engineer

Organization: City of Akron, Ohio

Street Address: 2460 Akron Peninsula Rd.

City: Akron **State:** OH **Zip Code:** 44313

Phone: 1-330-375-2963 **Fax:** 1-330-375-2966

Email Address: TFSmith@akronohio.gov

Web Site Address (if applicable):

http://www.akronohio.gov/cms/sewer/water_reclamation_services/index.html

E. Regulatory/Emergency Contact

Legal Name of Contact Person: Thomas F. Smith PE

Title: Senior Engineer

Organization: City of Akron, Ohio

Street Address: 2460 Akron Peninsula Rd.

City: Akron **State:** OH **Zip Code:** 44313

Phone: 1-330-375-2965 **Fax:** 1-330-375-2966

Email Address: TFSmith@akronohio.gov

Web Site Address (if applicable):

http://www.akronohio.gov/cms/sewer/water_reclamation_services/index.html

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:

Yes The facility is located in Ohio.

No 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.

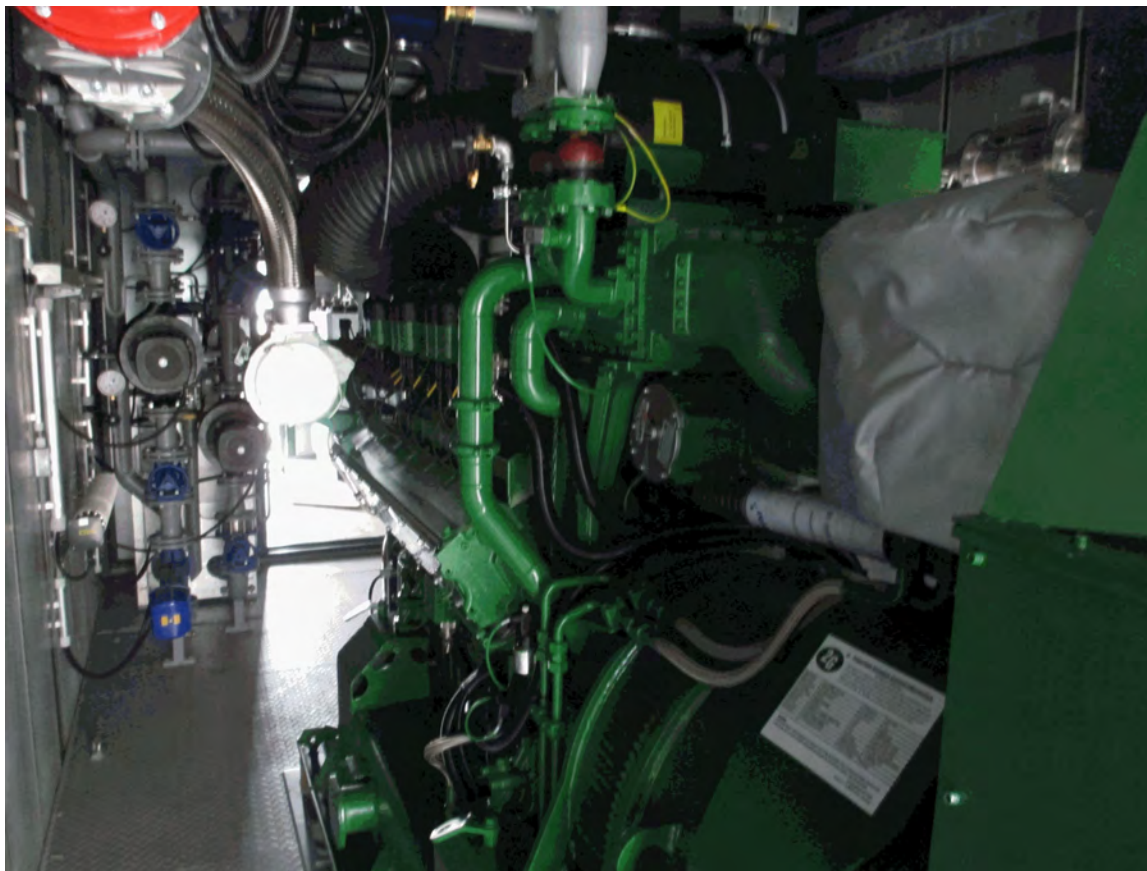
The City of Akron, Ohio operates a 75 million gallon per day wastewater treatment facility that generates biological solids (municipal sludge) as part of the treatment process. All of the municipal sludge is directed to a 15,000 dry ton per year anaerobic digestion system (ADS). The ADS process uses bacteria to generate biogas, which is used to fuel 3 (600 KWH) engine driven generators. Electric power from the generators is fed back into the facility for internal use. Heat from the engines is recovered and is used to support the anaerobic process and to supplement a sludge drier.

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 generation output is measured by three (3) separate electronic power meters. Each meter measures the output power from one generator. The outputs from each meter are transferred to one meter that will be designated a master meter and will totalize the output power from all the generators to provide a monthly totalization of all electric power being exported into the facility for internal consumption. The electric meters are utility grade JemStar meters, model JS-09R6010-C6 9 (serial numbers SN-13-01-19389/ SN-13-01-19391/ & SN-13-01-19390) See exhibit I for manufacture's data sheet for these meters. Meters take the 480 V. 3 ph power and use 3 CTs to measure current on each leg to calculate the electric power being produced by each generator. Meter installation and programming was verified by the project electrical engineer, who is a registered Professional Engineer in the State of Ohio. Meters were factory tested to show compliance with their specified accuracy ratings.

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.

October 02, 2013



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

G.10a Identify the fuel type used by the facility:

Landfill gas: No

Solid fuel:

No Wood
No Agricultural
No Other

Wood and paper manufacturing waste: No

Biogas (anaerobic digestion):

No On-farm
Yes Wastewater treatment
No Food processing
No Other

Biofuel (biodiesel): No

Biomass (other): No

G.10b Describe the content (fully characterize the fuel material) and source of solid waste: The fuel is digested municipal sludge generated from wastewater. This material is renewable since wastewater generates a constant source of sludge that needs to be disposed of. Product composition of fuel generated is shown following.

Biogas production (ft ³ / lb VS destroyed):	17.9	
Heating content (BTU/scf):	560	
CH ₄ (%):	52	
N ₂ (%):	7	
O ₂ :		2.2
H ₂ :	0.00006	
H ₂ S (ppm):	83	
Siloxane (mg/m ³):	4.6	

G.10c What is the expected heat content for each of the fuels used by the plant?

Heating content is 560 BTU/scf.

G.10d Is the facility co-firing more than one fuel type? No

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

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

100% of all fuel going to the generators is Biomethane.

G.10f Please submit (or input here) the formula for computing the proportions of output per fuel type by MWh or kWh generated:

See answer to G10e. All energy is being generated on Biomethane fuel.

G.10g What is the projected annual gross generation from each fuel type?

Estimated annual output of electricity on Biomethane is 10301 MWH.

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:

Yes has a placed-in-service date on or after January 1, 1998; Date: 1/22/14

No has been modified or retrofitted on or after January 1, 1998; Date:

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.

No Not yet online; projected in-service date:

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

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): 1,800.00 (megawatts (MW): 1.8)

I.b If applicable, what is the expected heat rate of resource used per kWh of net generation:
9,424 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>
1/22/14	0.6	5,150	98.0	3

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

J. Regional Transmission Organization Information

In which Regional Transmission Organization area is your facility located:

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

No 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: NON40474

(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? Yes

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? No

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>
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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:

No Distributed Generation with both on-site use and wholesale sales.
Identify the Utility:

Yes Distributed Generation, interconnected without net metering.
Identify the Utility: Ohio Edison Company

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 Ametek Poer Instruments, Div. of Rochester Scientific

N.1.b Serial Number: SN-13-01-19389/ SN-13-01-19390/ SN-13-01-19391

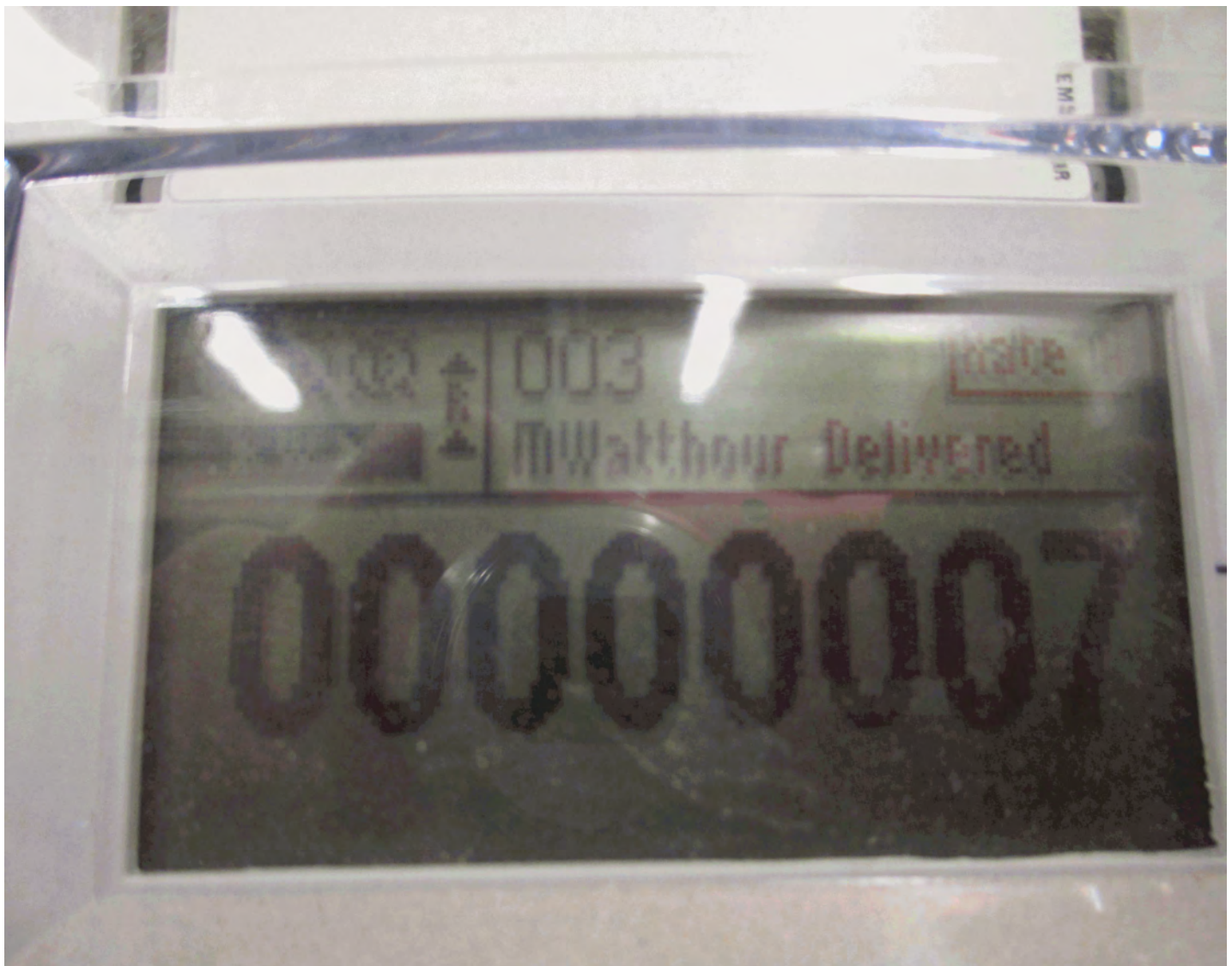
N.1.c Type: JS--13-09R6010-C6

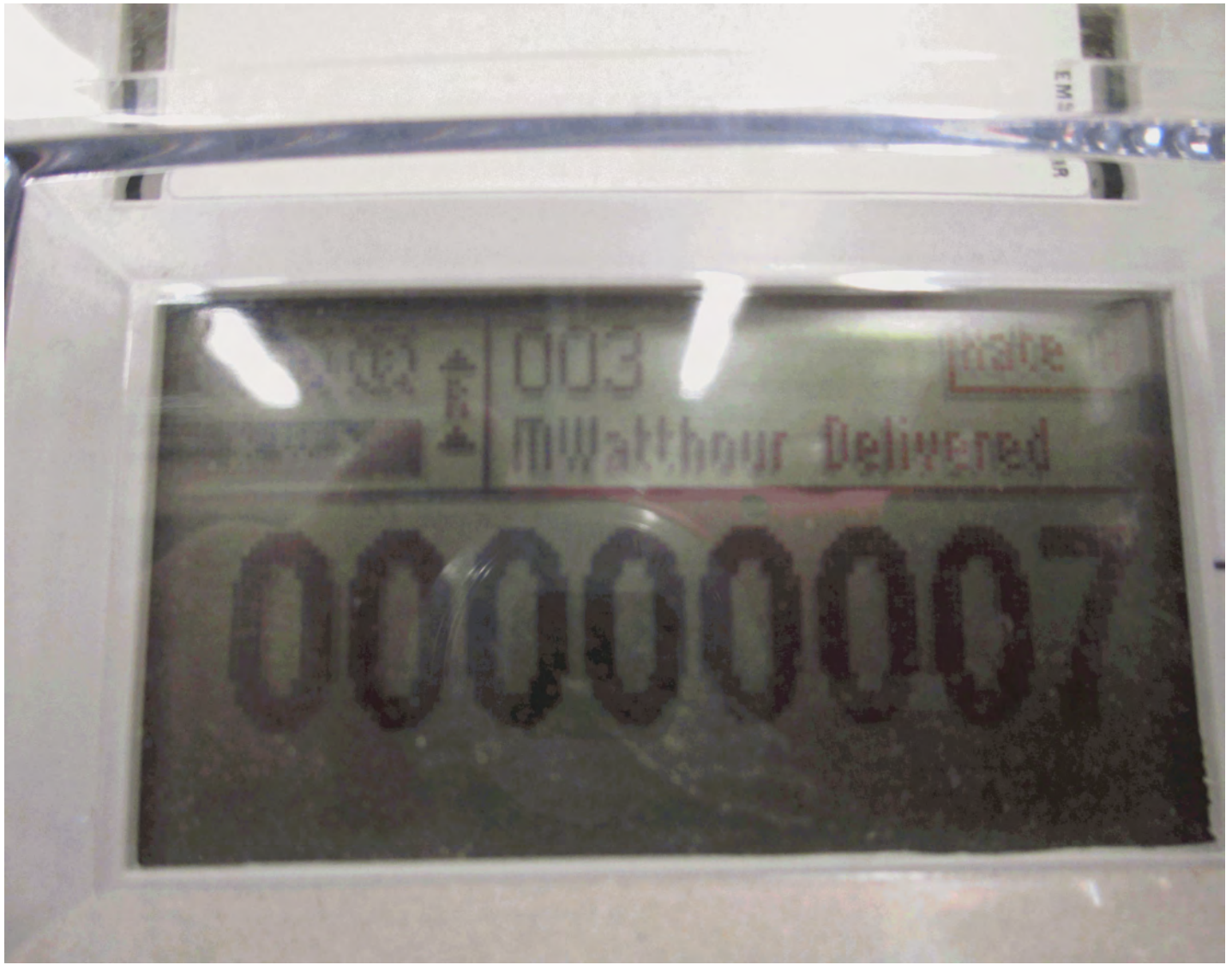
N.1.d Date of Last Certification: June 01, 2013

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): 7

1/28/2014 12:00:00AM





9:38:21 PM 7/23/2009 KG

Approval of dry feeding is missing



power supplied total:	3708.3 MWh
power supplied today:	2.4 MWh
power supplied yesterday:	4.1 MWh

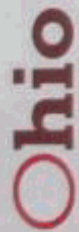
total consumed:	395078 kWh
consumed today:	454 kWh
consumed yesterday:	726 kWh

Operational
data 1

Operational
data 2

consumed
/supplied

start-
screen



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: 14-0078-EL-REN

Facility Name: Akron Biosolids to Energy Project Phase II

Name of person making this affidavit: Thomas E. Smith PE

State of Ohio
County of Summit

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.

Thomas E. Smith, Senior Engineer
Signature of Affiant & Title

Sworn and subscribed before me this 31st day of January, 2014 Month/Year

Patricia A. Trudick
Notary

My commission expires on _____
PATRICIA A. TRUDICKS, Notary Public
Residence - Summit County
State Wide Jurisdiction, Ohio
My Commission Expires April 26, 2014



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

Commission of Ohio Docketing Information System on

2/6/2014 2:43:15 PM

in

Case No(s). 14-0078-EL-REN

Summary: Application electronically filed by Mr. Mark C Bellamy on behalf of City of Akron and Tom Smith