



Public Utilities Commission

Case No.: ____ - ____ -EL-REN

AFFIDAVIT

State of Ohio :

Akron ss.
(Town)

County of Summit :

David W. Pinter, Affiant, being duly sworn/affirmed according to law, deposes and says that:

1. I am the duly authorized representative of Bay Shore Units 2, 3, and 4.
2. I have personally examined and am familiar with all information contained in the foregoing application, including any exhibits and attachments, and that based upon my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.
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.

David Pinter, Dir. Commodity Supply
Signature of Affiant & Title

Sworn and subscribed before me this 13th day of October, 2009 Month/Year

Stephen N. Hadick
Signature of official administering oath

STEPHEN N. HADICK, Attorney at Law
Notary Public - State of Ohio
My Commission Has No Expiration Date Sec. 147.03 R.C.



STEPHEN N. HADICK, Attorney at Law
Print Name, Notary Public, State of Ohio
My Commission Has No Expiration Date Sec. 147.03 R.C.

My commission expires on HAS NO EXPIRATION.



Case No.: ____ - ____ -EL-REN

A. Name of Renewable Generating Facility: Bay Shore Units 2, 3, and 4

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

Facility Location Lucas County, Ohio

Street Address: 4701 Bay Shore Rd.

City: Oregon State: OH Zip Code: 43616

Facility Latitude and Longitude

Latitude: 41.6830

Longitude: -83.3951

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: Bayshore

EIA Plant Code: 2878

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.

Applicant's Legal Name (First Name, MI, Last Name): FirstEnergy Solutions Corp.

Representative: David W. Pinter

Title: Director of Commodity Supply Planning

Organization: FirstEnergy Solutions Corp.

Street Address: 341 White Pond Drive

City: Akron State: OH Zip Code: 44320

Country: USA

Phone: 330-315-6755 Fax: 330-436-1901

Email Address: pinterd@firstenergycorp.com

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

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

Applicant's Legal Name: FirstEnergy Solutions Corp.
Representative: David L. Plusquellic
Title: Manager of Renewable Energy Portfolio
Organization: FirstEnergy Solutions Corp.
Street Address: 341 White Pond Drive
City: Akron State: OH Zip Code: 44320
Country: USA
Phone: 330-315-7225 Fax: 330-315-6749
Email Address: plusquellicd@firstenergycorp.com
Web Site Address (if applicable): www.firstenergysolutions.com

D. Name of Generation Facility Operating Company: FirstEnergy Generation Corp.
Legal Name of Contact Person (First Name, MI, Last Name): David L. Plusquellic
Title: Manager of Renewable Energy Portfolio
Organization: FirstEnergy Solutions Corp.
Street Address: 341 White Pond Drive
City: Akron State: OH Zip Code: 44320
Country: USA
Phone: 330-315-7225 Fax: 330-315-6749
Email Address: plusquellicd@firstenergycorp.com
Web Site Address (if applicable):): www.firstenergysolutions.com

E. Contact person for regulatory or emergency matters

Legal Name of Contact Person (First Name, MI, Last Name): David L. Plusquellic
Title: Manager of Renewable Energy Portfolio
Organization: FirstEnergy Solutions Corp.
Street Address: 341 White Pond Drive
City: Akron State: OH Zip Code: 44320
Country: USA
Phone: 330-315-7225 Fax: 330-315-6749
Email Address: plusquellicd@firstenergycorp.com
Web Site Address (if applicable): www.firstenergysolutions.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 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.

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.

See attachment 2

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 net generation from each unit is measured using the meters identified 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: Wood Pellet/Birquette

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):

INITIAL PHASE:

Sub-Bituminious coal	95% - 100%
Wood Pellet/Birquette	0% - 5%
Fuel oil for flame stabilization and startup	<10%

LONGER-TERM GOALS:

Sub-Bituminious coal	80% - 100%
Wood Pellet/Birquette	0% - 20%
Fuel oil for flame stabilization and startup	<10%

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

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):

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.

X Not yet online; projected in-service date (month/day/year): November 15, 2009

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.

X 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?

X 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): See table below.

If applicable, what is the expected heat rate of resource used per kWh of net generation:

Historically, these units have operated at a heat rate in the range of 10,000 to 12,000. Future heat rates are expected to be in the range of 10,000 to 11,000 BTU/kWh

Number of Generating Units: 3

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 %
Unit #2	138 MWs	0.3 to 0.9	30% to 80%
Unit #3	142 MWs	0.4 to 0.9	40% to 90%
Unit #4	215 MWs	0.3 to 1.7	20% to 80%

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

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: Midwest ISO and PJM, LLC

☐ 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): American Transmission Systems, Incorporated, local balancing authority

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:

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).

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).

M. Type of Generating Facility

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

☒ X Utility Generating Facility:

☐ Investor Owned Utility

☐ Rural Electric Cooperative

☐ Municipal System

☒ X 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:

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 3 for Meter Specifications

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.

Total kWh shown on meter at time of photograph: Unit #2 – 678,909.9 MWH,
Unit #3 – 407,425.3 MWH, Unit #4 – 324,385.5 MWH

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 Credits

Formula to calculate RECs:

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

Where,

MWH_{REC} = renewable energy credits

m_b = biofuel mass

m_c = coal mass

HHV_b = biofuel heating value

HHV_c = coal heating value

$MWH_{NET, MEASURED}$ = actual net megawatt hours measured for a given time period

Notes:

1. In the case of multiple biofuels this formula would be expanded to include $m_{b,1}...m_{b,x}$ and $HHV_{b,1}...HHV_{b,x}$ where x is the number of biofuels in use

Example Calculation:

During a 30 day period, Bay Shore Unit 3 generated steadily at 100 MWe based on its net meter. During the same 30 day period 36,000 tons of coal was burned along with 1,800 tons of biofuel. Lab analysis has shown the coal to have a HHV of 10,000 Btu/Lb and the biofuel to have a HHV of 8,000 Btu/Lb.

$$MWH_{REC} = \left(\frac{1,800\text{tons} \bullet 2,000\text{lb} / \text{ton} \bullet 8,000\text{Btu} / \text{lb}}{1,800\text{tons} \bullet 2,000\text{lb} / \text{ton} \bullet 8,000\text{Btu} / \text{lb} + 36,000\text{tons} \bullet 2,000\text{lb} / \text{ton} \bullet 10,000\text{Btu} / \text{lb}} \right) \dots$$

$$\dots \bullet 100\text{MWe} \bullet 30\text{Day} \bullet 24\text{H} / \text{Day}$$

$$MWH_{REC} = 2,769$$

The number of Renewable Energy Credits generated during the 30 day period is 2,769.

OVERVIEW OF CURRENT OPERATIONS

Currently coal is transported by rail to the plant yard for fuel for Units 2 – 4. Coal is stored in a stockpile outdoors and may be reclaimed by underground equipment for use in the Plant. Coal may also be transported into the Plant directly from the rail unloader. Whether reclaimed underground or directly from rail, coal is subsequently conveyed above ground in the coal handling system and supplied to in plant silos. Dust collection and mitigation sprays are installed at various points along the coal handling system. A deluge system protects the coal handling system from fire. All coal unloaded at the facility is weighed by belt meters which is used to determine the quantities that are burned by each unit or placed into reserve. The data are entered manually into the Fuel Works database daily.

RETROFITS FOR BIOFUEL

Biofuel Transportation

Biofuel will be transported using semi-tractor covered trailers with dump capability. Trucks will be weighed on site and the values will be logged on a physical printed ticket so that at any given time the delivered mass of biofuel is known. This data will be entered manually into the Fuel Works database. Trucks will be routed to the plant yard operation either through the existing construction gate or limestone unloading gate. Trucks will dump the fuel load into covered storage and then exit the plant site through the construction gate.

Fuel may also be delivered by rail. This requires a shallow rail unloader to be retrofit to an existing plant rail spur. Fuel will be transported from the rail cars either by conveyor or truck to the covered storage.

Biofuel Storage

A storage building will be erected to minimize the absorption of moisture into the biofuel from rainfall. This building has approximate dimensions 50ft x 50 ft x 40 ft height. The building must be of sufficient size to hold about 600 tons of biofuel and allow trucks to dump their loads. The differential between the mass of biofuel delivered and mass of biofuel burned will equal the mass of biofuel in inventory.

Biofuel Handling

A front end loader equipped with a bucket scale will be used to transport biofuel from the storage building to the auxiliary fuel conveyor to the coal handling system. The bucket scale will weigh each bucket of biofuel and produce a physical printed ticket. The ticket data are entered manually into the Fuel Works database. The biofuel is then placed into the coal handling system, which conveys the fuel to in plant silos. The weight log will allow the plant to determine the mass of biofuel that has been burned during a given time period. In order to get biofuel into the existing coal handling system, an auxiliary fuel conveyor will be retrofit into the system that allows for the mixing of biofuel and coal. This conveyor will have variable speed capability and/or flow regulation so that the biofuel feed rate may be adjusted to achieve a desired fuel blend. The biofuel/coal fuel blend will travel along the existing coal handling system to each unit's in plant silos through pulverizers to each boiler. Biofuel will be blended with coal up to 5% heat input initially for each of Units 2, 3, and 4.

Safety Measures

Biofuel is more volatile than coal and its dust, in the necessary concentration in air, creates a risk of explosion given an ignition source. With this in mind, mechanical dust collectors and/or sprays may be added at significant dust points. In general, transfer points create dust more so than other points in the coal handling system. Therefore dust mitigation technology may be placed at the following locations:

1. Storage building where trucks are unloading
2. Retrofitted auxiliary fuel conveyor where front-end loader dumps
3. First transfer point in the existing coal handling system

In addition to engineering controls, housekeeping will be a significant focus to prevent dust settling on horizontal surfaces where it can build up over time. Existing fire suppression systems will be used to protect the coal handling system. Additionally administrative controls will be enforced including fire hoses placed strategically along with fire extinguishers.

On September 18, 2009, FirstEnergy Generation Corp. requested from Ohio EPA a six month research and development permit exemption under O.A.C. Section 3745-31-03 (3) (d) to test co-firing of biomass fuels at Bay Shore Units 1, 2, 3, and 4, beginning the week of **November 15, 2009**. Upon acceptance of this permit exemption, FirstEnergy Generation Corp. will commence test burn of biomass at these units. FirstEnergy Generation Corp. will supplement this filing with a copy of the acceptance letter from OEPA as soon as it becomes available.

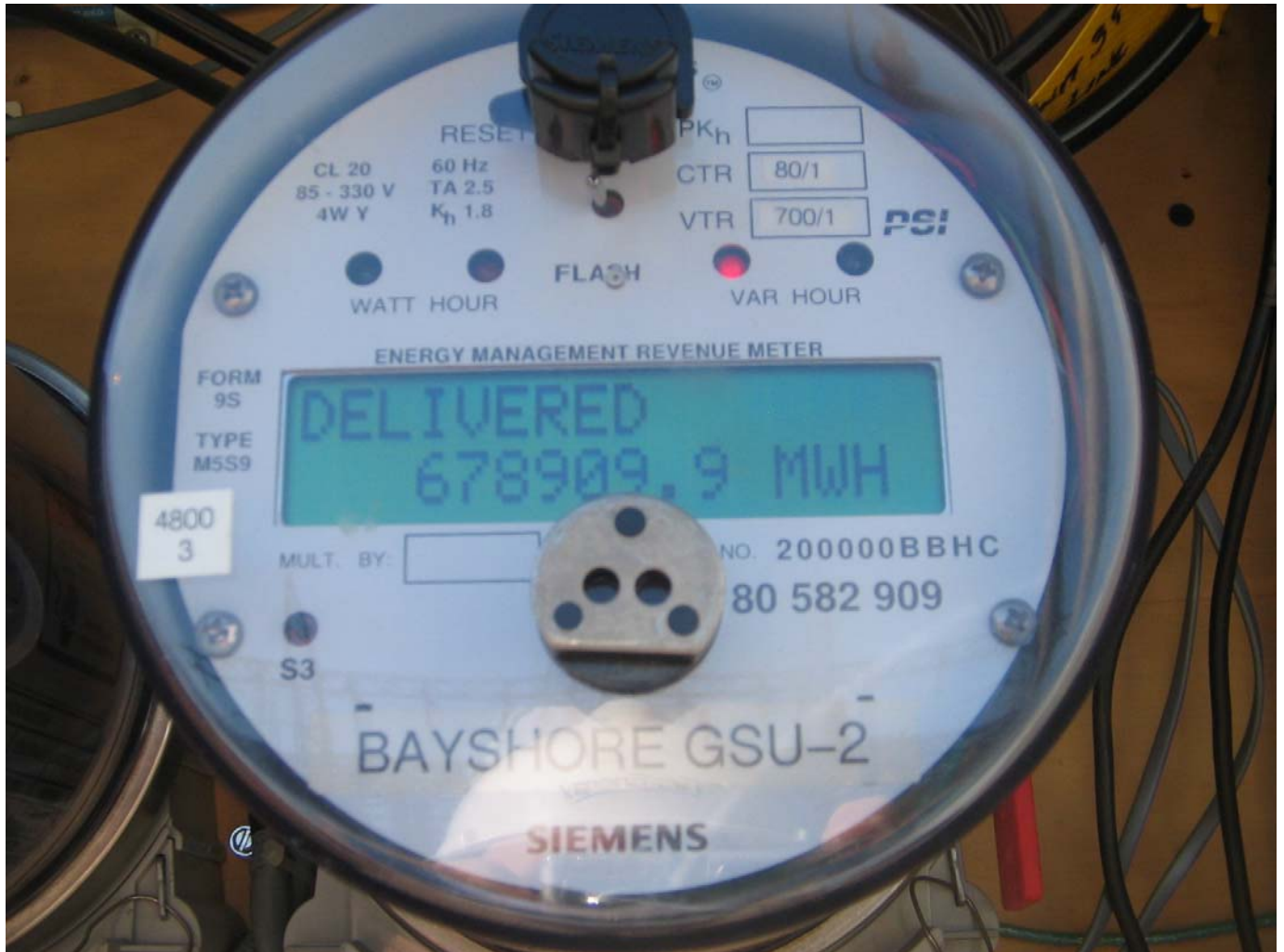
Attachment 3 – Meter Specifications

Meter Specifications

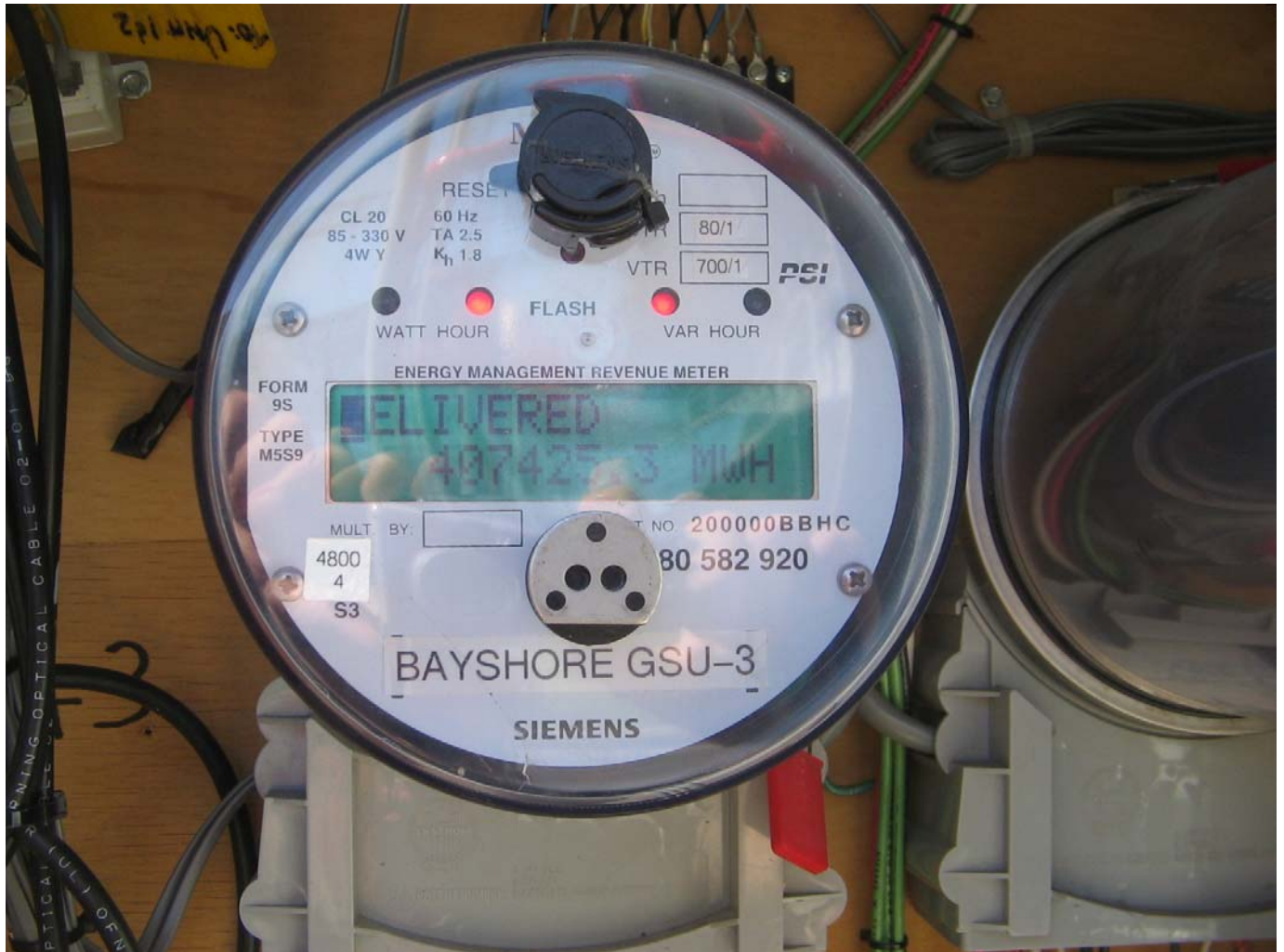
Bay Shore Plant

<u>Generating Units</u>	<u>Manufacture r</u>	<u>Utility Grade Meter (Revenue Meter)</u>		<u>Date of Last Certification</u>	<u>Next Certification Date</u>
		<u>Serial Number</u>	<u>Type</u>		
BS2	Siemens	680-582-909	2510	December 11, 2007	by 12/31/2009
BS3	Siemens	680-582-920	2510	October 2, 2007	by 12/31/2009
BS4	Siemens	680-582-911	2510	October 1, 2007	by 12/31/2009

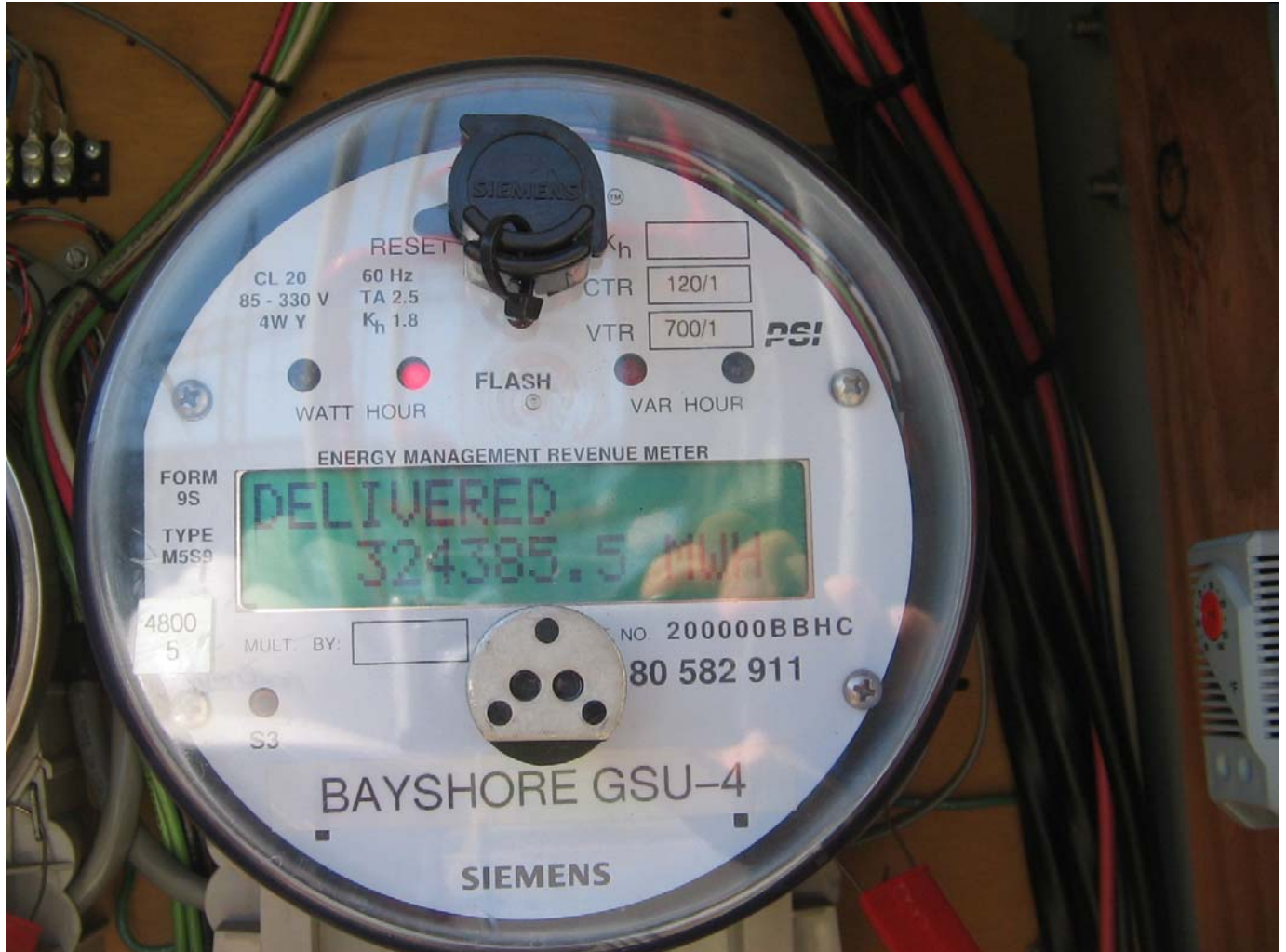
Bayshore Unit #2 - Meter



Bayshore Unit #3 - Meter



Bayshore Unit #4 - Meter



This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 09-0933-EL-REN

Summary: Application for Certification as an Eligible Ohio Renewable Energy Resource
Generating Facility electronically filed by Mr. George A Yurchisin on behalf of Mr. Joseph
Zuschak and Mr. Michael Beiting