



Case No.: 13-0643-EL-REN

A. Name of Renewable Generating Facility: Baldwin Wallace University R. Amelia Harding House
for Sustainable Living

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

Facility Location

Street Address: 77 West Bagley Road

City: Berea State: OH County: Cuyahoga Zip Code: 44017

Facility Latitude and Longitude

Latitude: 41.37 Longitude: -81.86

*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:

EIA Plant Code:

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: Baldwin Wallace University

Legal Name of Facility Owner Representative (First Name, MI, Last Name): William M. Reniff

Title: V.P. of Finance and Administration

Organization: Baldwin Wallace University

Street Address: 275 Eastland Road

City: Berea State: OH Zip Code: 44017

Phone: 440-826-2401 Fax: 440-826-8100

Email Address: breniff@bw.edu

Web Site Address: www.bw.edu

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 (First Name, MI, Last Name): William M. Reniff

Title: V.P. of Finance and Administration

Organization: Baldwin Wallace University

Street Address: 275 Eastland Road

City: Berea State: OH Zip Code: 44017

Phone: 440-826-2401 Fax: 440-826-8100

Email Address: breniff@bw.edu

Web Site Address: www.bw.edu

D. Name of Generation Facility Operating Company:

Name of Generation Facility Operating Company: GoSol, LLC

Legal Name of Contact Person (First Name, MI, Last Name): Carrie Rosko

Title:

Organization: GoSol, LLC

Street Address: Monarch Center #300

City: Mayfield Heights State: OH Zip Code: 44124

Phone: 440-460-0076 Fax: Email Address: crosko@crnstn.com

Web Site Address (if applicable):

E. Regulatory/Emergency contact

Legal Name of Contact Person (First Name, MI, Last Name): William M. Reniff

Title: V.P. of Finance and Administration

Organization: Baldwin Wallace University

Street Address: 275 Eastland Road

City: Berea State: OH Zip Code: 44017

Phone: 440-826-2401 Fax: 440-826-8100

Email Address: breniff@bw.edu

Web Site Address: www.bw.edu

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 (Indiana, Kentucky, Michigan, Pennsylvania, or West Virginia).

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 R. Amelia Harding House for Sustainable Living solar array is an 8.64 kW DC PV system that is owned by GoSol, LLC and grid-tied. The interconnection agreement with First Energy was signed on November 19, 2012. The array is roof-mounted on 1) A flat-roof portion of the main building 2) A low-slope portion of the main building and 3) A normal-slope portion on a straw-bale shed. For the flat-roof portion, the modules are installed on ballasted Rayport AET flat-roof racking. For the low-slope portion, the modules are installed on snapNrack racking, which is anchored into the roof. For the normal-slope portion, the modules are installed on snapNrack racking, which is anchored into the straw-bale shed's roof.

The array has 3 strings: One of 20, one of 11, and one of 5, for a total number of 36 modules. The array azimuth is 180, due South. For the flat-roof portion, the tilt is fixed at 10 degrees. For the low-slope portion, the tilt is fixed at 0 degrees. For the normal-slope portion, the tilt is fixed at 45 degrees.

DC power produced is inverted to AC power on a per-panel basis via Enphase Energy M215 120/240V microinverters that are mounted underneath the panels on the racking system. There are 36 microinverters in total. The three strings in this system run down to a 125A combiner box, which aggregates all three strings together as well as protects each string with a 20A breaker. From there, the combined output goes through a utility-grade solar production meter and then a 60A AC Disconnect/Safety Switch. From the switch, the string goes into a 250A building distribution panel labeled "HP", where the string is protected by a 50A breaker.

Because the system is over 6kW, a utility-grade meter was installed to track solar production. The system is also monitored by an Enphase Envoy monitoring gateway, which includes ethernet-based connectivity for Enphase Enlighten (web interface) data collection and monitoring. The Envoy transmits and receives data to/from the microinverters via the neutral power line.

Panels:

Thirty-six (36x) - REC240 PE-US Modules (black)

Inverters:

Thirty-six (36x) - Enphase M215-60-240-S22 microinverters, 208V

Metering:

One (1x) - CL200, 200A, 208V, three-phase, Form 16S, digital, kV2c GE kWh meter

One (1x) - Enphase Envoy Monitoring Gateway

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 the facility will be measured using the aforementioned in-line digital GE kWh meter.

Class: 200

Form: 16S

Voltage: 120/208V

Wiring: 4-wire

Serial: 50 375 709

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.

July 26, 2012



July 31, 2012





The Applicant is applying for certification in Ohio for a facility using one of the following qualified resources or technologies (Sec. 4928.01 ORC):

G.4 SOLAR PHOTOVOLTAIC

G.4a Location of the PV array: Yes Roof No Ground No Other

Description:

G.4b Total number of Modules: 36

G.4.1 PV Modules

For each PV module, provide the following information:

G.4.1.a Manufacturer: REC

G.4.1.b Model and Rating: REC240 PE-US (Black) 240W

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; (month/day/year):

Yes has a placed-in-service date on or after January 1, 1998; (month/day/year): 7/28/12

No 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.

No Not yet online; projected in-service date (month/day/year):

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): 8.64 or in megawatts (MW): 0.00864

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 Date</u>	<u>Unit Nameplate Capacity (MW)</u>	<u>Projected Gross Annual Generation</u>	<u>Expected Annual Capacity Factor %</u>	<u>Number of Generating Units</u>
7/28/12	0.00864	7.4	9.8	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:

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: NON70821

(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).

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>State Certification</u>	
<u>Name of State</u>	<u>Agency</u>	<u>Date Issued</u>

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)

Yes Distributed Generation with a net metering and interconnection agreement with a utility.

Identify the utility: CEI (First Energy)

No Distributed Generation with both on-site use and wholesale sales.

Identify the utility with which the facility is interconnected:

No Distributed Generation, interconnected without net metering.

Identify the utility with which the facility is interconnected:

N. Meter Specifications

Metering Requirements

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.

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)

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:

N Inverter Meter(s)

Y 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: GE

N.1.b Serial Number: 50 375 709

N.1.c Type: kV2c

N.1.d Date of Last Certification: July 28, 2012

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): 0 kWh

July 31, 2012



O. Start date from which applicant requests to begin reporting generation towards the creation of Renewable Energy Credits (RECs) for Ohio's purposes

The start date from which an attribute tracking system will begin to count generation data toward the creation of renewable energy credits for Ohio's purposes will be the date of certificate issuance in the state of Ohio (i.e. generation prior to the date of certification would not be recognized), unless the facility satisfies one of the criterion established in the Commission's June 17, 2009 Entry on Rehearing issued in Case No. 08-888-EL-ORD.

In that Entry, the Commission found it to be appropriate to recognize the creation of RECs back to July 31, 2008, the date in which the Ohio alternative energy portfolio standard law became effective, provided that "The facility was a participant in an existing attribute tracking system during that time or had a meter in place which can accurately demonstrate generation levels from July 31, 2008 forward." (June 17, 2009 Entry on Rehearing at 34.)

(1) Existing attribute tracking system:

- a. For facilities that are currently participating in an attribute tracking system, it is not sufficient to merely be registered with the tracking system; you also must be reporting generation data.
- b. If the facility was a participant in an existing attribute tracking system, please state the specific start date that will be used to recognize historical RECs.

(2) Meter which can accurately demonstrate generation levels from July 31, 2008:

- a. For facilities which have had a meter in place, accurately demonstrating generation levels must include documentation from an electric remote monitoring and reporting system, from the specified start date, and recorded on at least a monthly basis.
- b. If the facility had a meter that accurately demonstrates generation levels, please state the specific start date, and attach documentation from the remote monitoring and reporting system.

Note: An application that leaves section O blank, or does not include the required documentation, will be assigned a start date for Ohio that corresponds with the date of Ohio certification.

If the facility was a participant in an existing attribute tracking system, please state the specific start date, in accordance with the tracking system's rules, that will be used to recognize historical RECs:

If the facility had a meter that accurately demonstrates generation levels, please state the specific start date, and below insert documentation from the remote monitoring and reporting system: July 28, 2012

Also, in the Commission's Entry on Rehearing, the Commission explained that consistent with its policy on double counting, the Commission "will not retroactively recognize any past RECs which have been sold or otherwise consumed." (June 17, 2009 Entry on Rehearing at 34.)

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

Energy: Lifetime ▾

Jul 28, 2012 – Nov 29, 2012 ?

36 Microinverters

Berea, OH

Full System

Energy

Status

Today

19.0 kWh

Peak Power: 4.00 kW at 12:55 P

Latest Power: 143 W at 4:00 PM

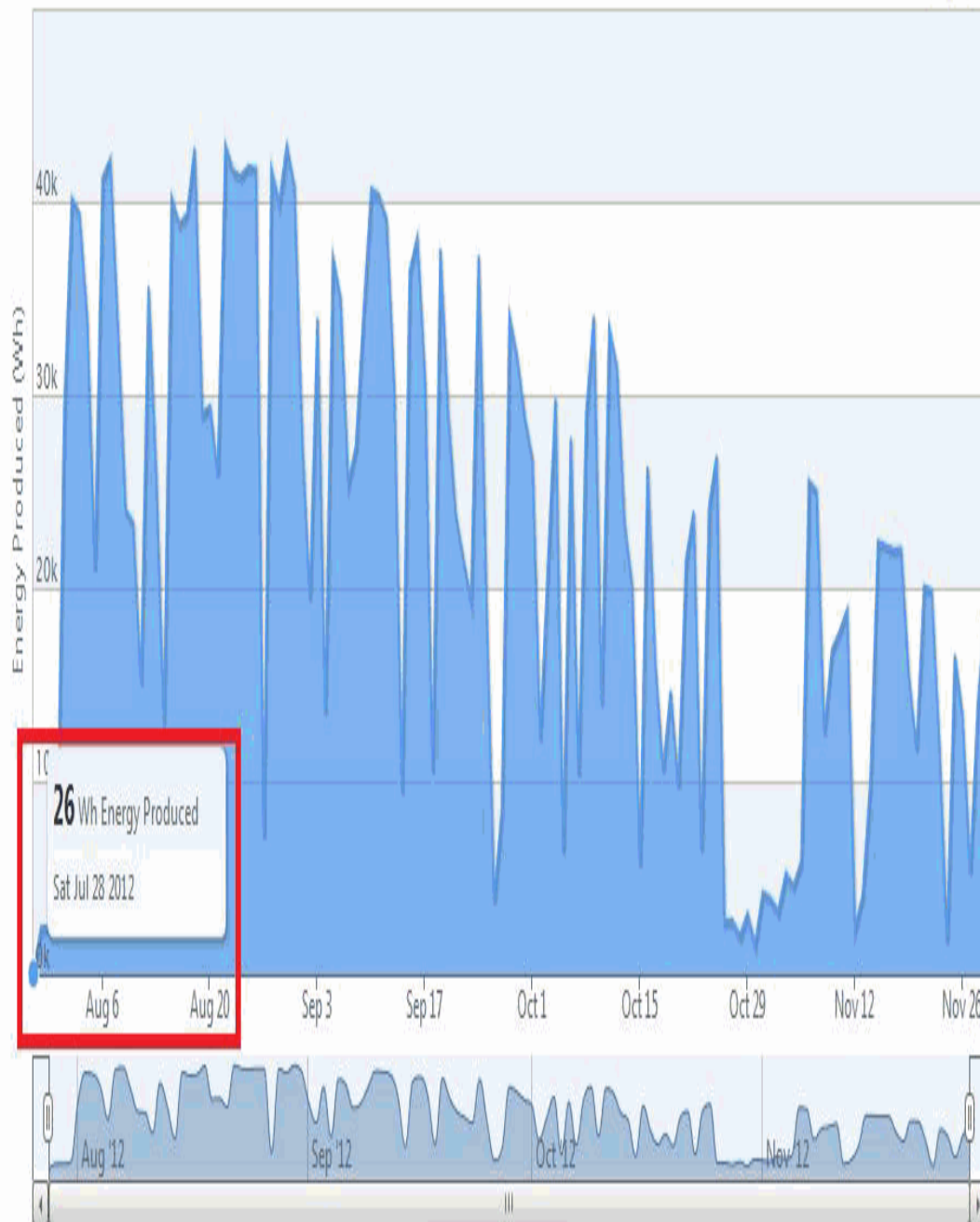
Past 7 Days

81.8 kWh

Month To Date

393 kWh

Lifetime

2.79 MWh

Energy Produced



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: 12-3114-EL-REN

Facility Name: Baldwin Wallace R. Amelia Harding House for Sustainable Living

Name of person making this affidavit: Robert Martens

State of Ohio

County of Cuyahoga

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.

, President: Bold Alternatives, Bold R. Enterprises, Inc.

Signature of Affiant & Title

Sworn and subscribed before me this 8th day of March 2013 Month/Year

Notary

My commission expires on 11-1-2016



WENDY J. KRENN
Notary Public, State of Ohio
My Commission Expires
November 1, 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 15, 2011

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). 13-0643-EL-REN

Summary: Application for a renewable generation facility (solar) electronically filed by Mr. Michael A Sokol on behalf of Baldwin Wallace University