



**Case Number: 13-1363-EL-REN**

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**A. Generating Facility**

**Name of Renewable Generating Facility:** Oak Harbor SAD -12

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

**Facility Location**

**Street Address:** 11709 CHRISTIANSEN

**City:** Oak Harbor **State:** OH **County:** Ottawa **Zip Code:** 43449

**Facility Latitude and Longitude**

**Latitude:** 41.523004 **Longitude:** -83.154069

*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:**

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**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:** Solar Advocate Development - 12, LLC

**Legal Name of Facility Owner Representative:** Charley Shin

**Title:** Owner

**Organization:** Solar Advocate Development

**Street Address:** 2500 Farmers Drive Ste 140

**City:** Columbus **State:** OH **Zip Code:** 43235

**Phone:** 6149234710 **Fax:** 6149234701

**Email Address:** smarkley@charleys.com

**Web Site Address (if applicable):**

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**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:** Charley Shin

**Title:** Owner

**Organization:** Solar Advocate Development

**Street Address:** 2500 Farmers Drive Ste 140

**City:** Columbus **State:** OH **Zip Code:** 43235

**Phone:** 6149234710 **Fax:** 6149234701

**Email Address:** smarkley@charleys.com

**Web Site Address (if applicable):**

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**D. Name of Generation Facility Operating Company**

**Name of Generation Facility Operating Company:** Solar Advocate Development - 12, LLC

**Legal Name of Contact Person:** Charley Shin

**Title:** Owner

**Organization:** Solar Advocate Development

**Street Address:** 2500 Farmers Drive Ste 140

**City:** Columbus **State:** OH **Zip Code:** 43235

**Phone:** 6149234710 **Fax:** 6149234701

**Email Address:** smarkley@charleys.com

**Web Site Address (if applicable):**

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**E. Regulatory/Emergency Contact**

**Legal Name of Contact Person:** Charley Shin

**Title:** Owner

**Organization:** Solar Advocate Development

**Street Address:** 2500 Farmers Drive Ste 140

**City:** Columbus **State:** OH **Zip Code:** 43235

**Phone:** 6149234710 **Fax:** 6149234701

**Email Address:** smarkley@charleys.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 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.)*

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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.**

The system is a PV array consisting of solar PV modules, solar power inverters and will be grid tied.  
The system is a 636 kW DC.

**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 monitored by 2 meters.  
The first meter would be based on the inverters.  
And the second meter would be a revenue grade meter.

**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.**



June 06, 2013







June 06, 2013





June 06, 2013



June 06, 2013





June 06, 2013



June 06, 2013





June 06, 2013



June 06, 2013





**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:** Ground

Description:

**G.4b Total number of Modules:** 572 pieces of Trina 230 watt and 1980 pieces of Renesola 255 watt.

**G.4.1 PV Modules**

For each PV module, provide the following information:

**G.4.1.a Manufacturer:** Trina and Renesola

**G.4.1.b Model and Rating:** Trina 230 watt and Renesola 255 watt.

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**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: 6/5/13

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? 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): 636.46 (megawatts (MW): 0.63646)

**I.b** If applicable, what is the expected heat rate of resource used per kWh of net generation:  
795,575 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>
6/5/13	0.00023	0.276	13.7	572
6/5/13	0.000255	0.306	13.7	1,980

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

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## 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):

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## K. Attribute Tracking System Information

Are you currently registered with an attribute tracking system: 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)*:

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:

*(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? 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:     Village of Oak Harbor
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## **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: Electro Industries / GaugeTech

N.1.b Serial Number: 0125647530

N.1.c Type: Shark100T-60-10-V3-D2-INP10

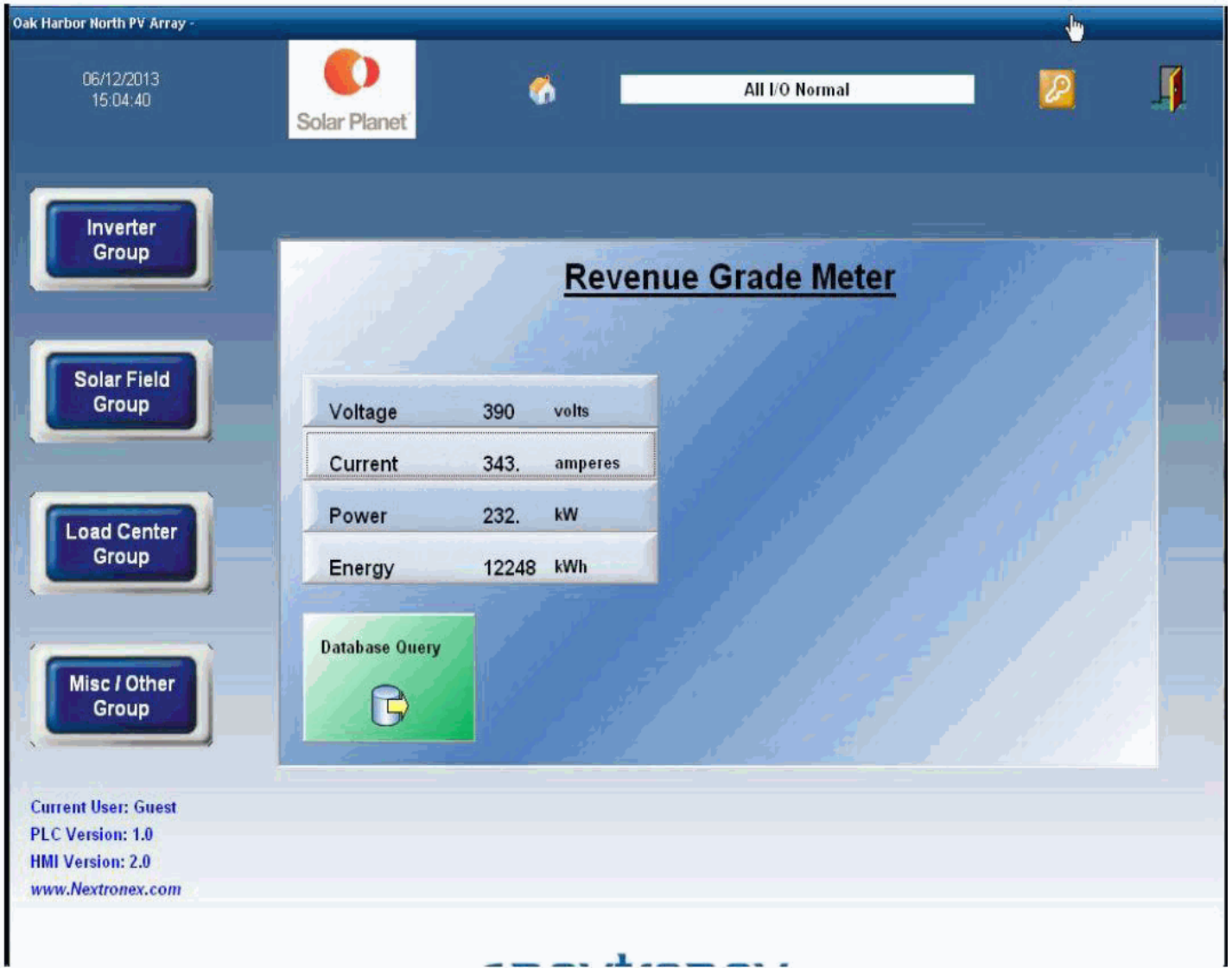
N.1.d Date of Last Certification: April 11, 2013

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): 12248

6/12/2013 12:00:00AM







**Electro Industries / GaugeTech**

1800 Shames Drive, Westbury, NY 11590-1730 USA

Tel: 516-334-0870 \* Fax: 516-334-3924

Web Site: www.electroind.com

**Calibration and Final Test Report**

**Model** Shark 100T  
**Software Ver** 2.6.0  
**Config File Version** 4  
**Performed By** ella  
**Serial Number** 0125647530  
**Date** 4/11/2013  
**Class** 10  
**Frequency** 60 Hz  
**Part Number** Shark100T-60-10-V3-D2-INP10

**Start** 10:20:09  
**End** 11:38:04  
**Duration** 1:17:55

**Source** FLUKE  
**Model** 5080A  
**Serial No.** 1439003

**Reference** RD-20-202  
**Serial No.** 205521

**V-Switch** 3

Cal FW	54
Run FW	51

Voltage			
	A	B	C
0 V	0.000V	0.000V	0.000V
69 V	0.004	0.031	0.006
120 V	-0.009	-0.012	-0.009
230 V	0.002	0.007	-0.001
480 V	0.006	0.011	0.008

Current			
	A	B	C
0.000 A	0.000A	0.000A	0.000A
0.250 A	0.008	-0.011	-0.007
0.500 A	0	0.01	0.001
1.000 A	-0.001	0.001	0.002
5.000 A	0.001	0.002	0

Final Test Checks	
Leds	Passed
Buttons	Passed
IrDA test	Passed
KYZ pulse test	Passed
Wh pulse test	Passed
Network test	Passed
Transducer Test	Passed

VA				
Value at	69 V	120 V	230 V	480 V
0.250A		-0.055		
0.500A		-0.025		
1.000A		-0.035		
5.000A	-0.029	-0.074	-0.039	-0.075

Frequency		
60Hz	-0.006	Passed

**FINAL QA INSPECTION**

Paperwork	<input type="checkbox"/>
Physical	<input type="checkbox"/>
Power up	<input type="checkbox"/>
LED Test	<input type="checkbox"/>
RS-485	<input type="checkbox"/>
IRDA	<input type="checkbox"/>
Spike	<input type="checkbox"/>

Watts								
Value at	69V		120V		230V		480V	
	0 Deg.	-60 Deg.	0 Deg.	-60 Deg.	0 Deg.	-60 Deg.	0 Deg.	-60 Deg.
0.250A			-0.026	-0.007				
0.500A			-0.011	-0.14				
1.000A			-0.009	-0.027				
5.000A	-0.006	0.005	-0.008	-0.002	-0.001	0.009	0.027	0.042

V-I Check	Passed	VA Check	Passed	W 0deg Check	Passed	W -60deg Check	Passed
Mean	0.002	Mean	-0.047	Mean	-0.005	Mean	-0.017
Median	0.001	Median	-0.039	Median	-0.008	Median	-0.002
Worst Error	0.031	Worst Error	-0.075	Worst Error	0.027	Worst Error	-0.14
Records in Band	95.833	Records in Band	100	Records in Band	100	Records in Band	100
Band Limit	+/-0.03	Band Limit	+/-0.1	Band Limit	+/-0.1	Band Limit	+/-0.2

# Passed

\*0125647530\*

000001

QC: \_\_\_\_\_

06/12/2013  
15:03:26



All I/O Normal



Inverter  
Group

Solar Field  
Group

Load Center  
Group

Misc / Other  
Group

DC BUS	SLAVE	STANDBY	MASTER
624	124	0	127
DC Bus Voltage	Inv 1 KW	Inv 2 KW	Inv 3 KW

Current User: Guest

PLC Version: 1.0

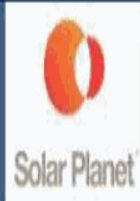
HMI Version: 2.0

[www.Nextronex.com](http://www.Nextronex.com)

**251**  
TOTAL  
KILOWATTS



06/12/2013  
15:04:40



All I/O Normal



Inverter  
Group

Solar Field  
Group

Load Center  
Group

Misc / Other  
Group

## Revenue Grade Meter

Voltage 390 volts

Current 343. amperes

Power 232. kW

Energy 12248 kWh

Database Query



Current User: Guest

PLC Version: 1.0

HMI Version: 2.0

[www.Nextronex.com](http://www.Nextronex.com)



## 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: 13-1363-EL-REN

Facility Name: Oak Harbor SAD-12

Name of person making this affidavit: David Dwyer

State of Illinois  
County of Cook

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.

Robert D. Dwyer, Project Director  
Signature of Affiant & Title

Sworn and subscribed before me this 13 day of JUNE, 2013 Month/Year

Marie E. Mitchell  
Notary

My commission expires on 2-14-2018



MARIE E. MITCHELL  
Notary Public, State of Ohio  
My Commission Expires 02-14-18

**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**

**9/17/2013 3:35:10 PM**

**in**

**Case No(s). 13-1363-EL-REN**

Summary: Application Initial application Oak SAD 12 electronically filed by Mr. Alex Yacques  
on behalf of SOLAR PLANET