



Case No.: 13-0545-EL-REN

A. Name of Renewable Generating Facility: Ruch Residence

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

Facility Location

Street Address: 2911 South Park Boulevard

City: Shaker Heights State: OH County: Cuyahoga Zip Code: 44120

Facility Latitude and Longitude

Latitude: 41.47 Longitude: -81.57

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: Edward Ruch

Legal Name of Facility Owner Representative (First Name, MI, Last Name): Edward Ruch

Title: Dr.

Organization:

Street Address: 2911 South Park Boulevard

City: Shaker Heights State: OH Zip Code: 44120

Phone: 216-921-3522 Fax: 216-921-6291

Email Address: ELR@Case.edu

Web Site Address:

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): Edward Ruch

Title: Dr.

Organization:

Street Address: 2911 South Park Boulevard

City: Shaker Heights State: OH Zip Code: 44120

Phone: 216-921-3522 Fax: 216-921-6291

Email Address: ELR@Case.edu

Web Site Address:

D. Name of Generation Facility Operating Company:

Name of Generation Facility Operating Company: Ruch Residence

Legal Name of Contact Person (First Name, MI, Last Name): Edward Ruch

Title: Dr.

Organization:

Street Address: 2911 South Park Boulevard

City: Shaker Heights State: OH Zip Code: 44120

Phone: 216-921-3522 Fax: 216-921-6291 Email Address: ELR@Case.edu

Web Site Address (if applicable):

E. Regulatory/Emergency contact

Legal Name of Contact Person (First Name, MI, Last Name):Edward Ruch

Title: Dr.

Organization:

Street Address: 2911 South Park Boulevard

City: Shaker Heights State: OH Zip Code: 44120

Phone: 216-921-3522 Fax: 216-921-6291

Email Address: ELR@Case.edu

Web Site Address:

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 Ruch Residence solar array is a 4.9kW DC PV system that is owned by Edward Ruch and is grid-tied. The interconnection agreement with First Energy was signed on November 21, 2012. The array is roof-mounted on a snapNrack racking system. The array has one string of 8 modules and one string of 12 modules for a total number of 20 modules. The array azimuth is approximately 170 degrees, SSE, at a fixed tilt of approximately 30 degrees. There are no discrete DC combiner boxes in the array, as the microinverters convert DC to AC on a per-panel basis via Enphase Energy M215-60-240-S22 120/240V microinverters that are mounted underneath the panels on the racking system. There are 20 microinverters in total. The strings in this system run down a 60A main-lug only AC Load Center where they are combined, and the output of that runs into a 60A AC Disconnect. From there the string enters the house's main distribution panel and terminates in a 30A breaker.

Panels:

Twenty (20x) - REC245 PE-US Modules (black)

Inverter:

Twenty (20x) - Enphase Energy M215-60-240-S22 120/240V 1-phase inverters

Metering:

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).

As the array is smaller than 6kW, the system does not need a utility-grade meter and as such, is monitored by an Enphase Envoy monitoring gateway, which includes ethernet-based connectivity for Enphase Enlighten data collection and monitoring. The Envoy transmits and receives data to/from the microinverters via the neutral power line. The data can be examined on the Enphase Enlighten website.

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.

February 12, 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: Yes Roof No Ground No Other

Description:

G.4b Total number of Modules: 20

G.4.1 PV Modules

For each PV module, provide the following information:

G.4.1.a Manufacturer: REC Group

G.4.1.b Model and Rating: REC245 PE-US (black)

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): 10/20/12

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): 4.90 or in megawatts (MW): 0.0049

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>
10/20/12	0.0049	4.443	10.4	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: NON70826

(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>Name of State</u>	<u>State Certification Agency</u>	<u>State Certification Number</u>	<u>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)

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

Identify the utility: First Energy - CEI

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:

Y Inverter Meter(s)

N 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: Enphase Energy

N.1.b Serial Number: 121233001107

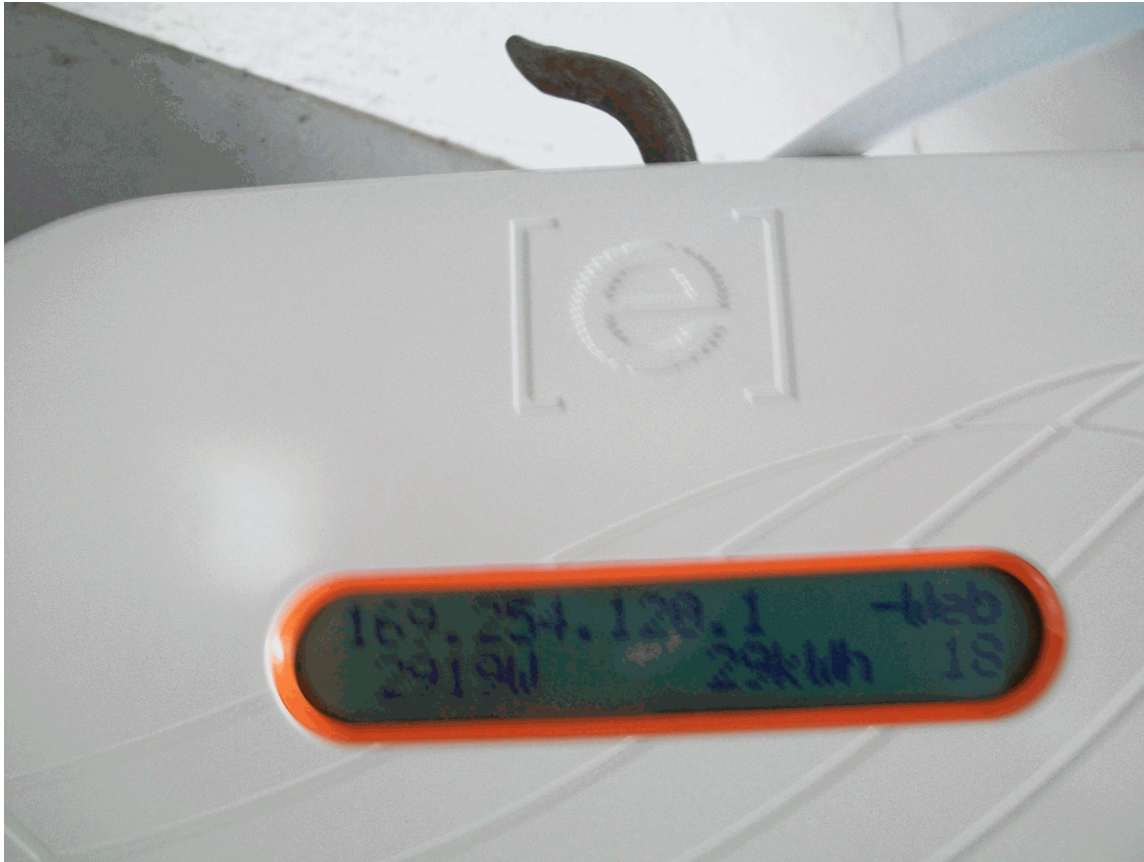
N.1.c Type: Envoy

N.1.d Date of Last Certification: October 20, 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): 29 kWh

October 22, 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: October 20, 2012

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:

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

Systems List

Ruch Residential (Garage)

Full System

View

Graph

Reports

Devices

Events

Events

Settings

Energy: Lifetime

Oct 20, 2012 - Feb 27, 2013

20 Microinverters
Shaker Heights, OH

36°F

Full System

Energy

Status

Today

2.61 kWh

Peak Power: 663 W at 11:20 AM

Latest Power: 2 W at 6:00 PM

Past 7 Days

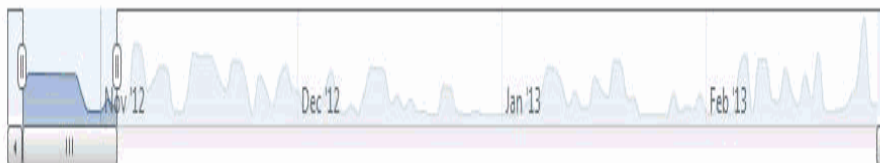
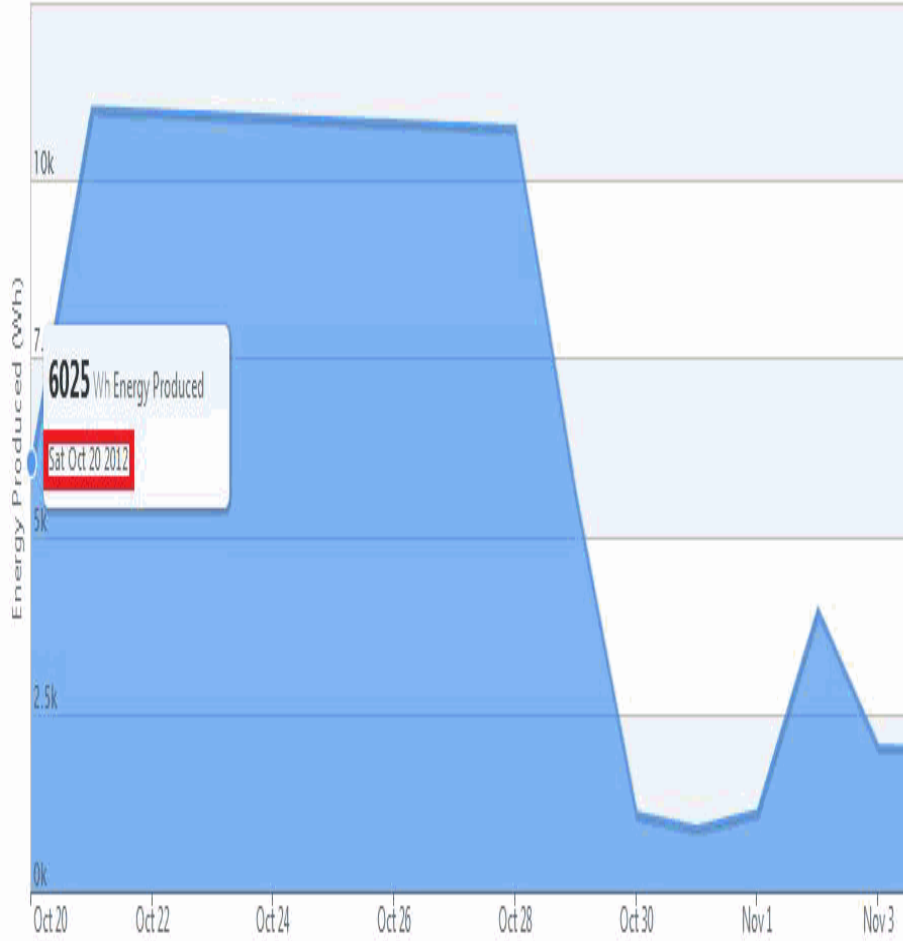
49.5 kWh

Month To Date

176 kWh

Lifetime

779 kWh



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: 13-0545-EL-REN

Facility Name: Ruch Residence

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.

[Signature], President: Bold Alternatives, Bold R. Enterprises, Inc.
Signature of Affiant & Title

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

[Signature]
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

5/1/2013 4:55:48 PM

in

Case No(s). 13-0545-EL-REN

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