Ohio | Public Utilities Commission

Online Application for Certification as an Eligible Ohio Renewable Energy Resource Generating Facility

Case Number: 14-0772-EL-REN

A. Generating Facility

Name of Renewable Generating Facility: Turkey Foot Middle School
The name specified will appear on the facility's certificate of eligibility issued by the Public Utilities Commission of Ohio.

Facility Location
Street Address: 3230 Turkeyfoot Rd
City: Edgewood **State:** KY **County:** Kenton **Zip Code:** 41017

Facility Latitude and Longitude
Latitude: 39.011548 **Longitude:** -84.580067
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: Kenton County School District
Legal Name of Facility Owner Representative: Christine L Baker
Title: Energy Systems Coordinator
Organization: Kenton County School District
Street Address: 1055 Eaton Dr.
City: Ft. Wright **State:** KY **Zip Code:** 41017
Phone: 8599572650 **Fax:** 8593441531
Email Address: chris.baker@kenton.kyschools.us
Web Site Address (if applicable): www.kenton.kyschools.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: Christine L.Baker
Title: Energy Systems Coordinator
Organization: Kenton County School District
Street Address: 1055 Eaton Dr.
City: Ft. Wright **State:** KY **Zip Code:** 41017
Phone: 8599572650 **Fax:** 8593441531
Email Address: chris.baker@kenton.kyschools.us
Web Site Address (if applicable): www.kenton.kyschools.us

D. Name of Generation Facility Operating Company

Name of Generation Facility Operating Company: Kenton County School District
Legal Name of Contact Person: Christine L. Baker
Title: Energy Systems Coordinator
Organization: Kenton County School District
Street Address: 1055 Eaton Dr.
City: Ft. Wright **State:** KY **Zip Code:** 41017
Phone: 8599572650 **Fax:** 8593441531
Email Address: chris.baker@kenton.kyschools.us
Web Site Address (if applicable): www.kenton.kyschools.us

E. Regulatory/Emergency Contact

Legal Name of Contact Person: Christine L. Baker
Title: Energy Systems Coordinator
Organization: Kenton County School District
Street Address: 1055 Eaton Dr.
City: Ft. Wright **State:** KY **Zip Code:** 41017
Phone: 8599572650 **Fax:** 8593441531
Email Address: chris.baker@kenton.kyschools.us
Web Site Address (if applicable): www.kenton.kyschools.us

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:

No The facility is located in Ohio.

Yes 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, PLASE 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.

436.33 kW of photovoltaics have been installed and commissioned on the Turkeyfoot Middle School roof and bus canopies in multiple phases.
During the first phase, 387.58 kW of total capacity was installed and commissioned in May 2011. This included 273.416 kW of Unisolar thin film laminated panels on most of the schools flat roof areas. 93.6 kW of Sharp mono-crystalline panels were installed on a steel super structure above the north roof portion at a tilt angle of 20 degrees. 18.72 kW of Sharp mono-crystalline panels were also installed on the standing seem metal roof above the main school entrance. PVPowered inverters were used for these systems.
In January 2012, the second phase was commissioned. This involved an additional 48.75 kW of Solarworld mono-crystalline panels located on architectural bus canopies along the west side of the parking lot. A mixture of PVPowered and Sunny Boy inverters were used for this system.

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).

Turkeyfoot middle school features a complete Power Logic sub-metering system which monitors all branch circuit electric panels throughout the building individually. There are also dedicated meters for each of nine PV inverters and one meter for the main circuit breaker protecting the PV switchboard. This system utilizes Power Logic PM850 meters with 0.15% power accuracy. All readings are recorded by computer based software for custom reporting.

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 01, 2011

June 01, 2011

June 01, 2011

June 05, 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: Other
Description: Roof and Covered walkway

G.4b Total number of Modules: 2937

G.4.1 PV Modules

For each PV module, provide the following information:
G.4.1.a Manufacturer: Unisolar/Unisolar/Sharp/Solorworld
G.4.1.b Model and Rating: PVL-136 136W/PVL-68 68W/NU240F1 240W/SW250 250W

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: **5/11/11**

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): 436.33 **(megawatts (MW):** 0.43633)

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:

Unit In-Service Date	Unit Nameplate Capacity (MW)	Projected Gross Annual Generation	Expected Annual Capacity Factor %	Number of Generating Units
5/11/11	0.38758	445.717	13.1	1
5/1/12	0.04875	56.064	13.1	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: 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:

Name of State	State Certification Agency	State Certification Number	Certification Date Issued

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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: **Duke Energy**

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

No Distributed Generation, interconnected without net metering.
Identify the Utility:

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048565

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 319.18 mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048561

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 292.095 mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048562

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 87.526 mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048558

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 88.125 mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048559

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 63.422mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048560

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 355.735mWh

4/25/2014 12:00:00AM

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 ± 2%)*

N.1 Please provide the following information for each meter used in your system.

N.1.a Manufacturer: Power Logic

N.1.b Serial Number: 0036048564

N.1.c Type: PM-850

N.1.d Date of Last Certification: May 10, 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): 135.263 mWh

4/25/2014 12:00:00AM

	May	June	July	August	September	October	November	December	March	TOTAL
PV SYSTEM.INVERTER 1	7,839.14	14,364.06	15,169.04	14,816.26	8,247.90	8,046.22	4,447.29	3,357.88	0.00	76,149.79
PV SYSTEM.INVERTER 2	7,592.89	14,671.34	14,424.80	15,275.47	8,026.62	979.20	4,451.06	3,404.72	0.00	68,736.10
PV SYSTEM.INVERTER 3	1,992.76	3,955.04	4,380.09	4,267.36	2,325.77	2,385.38	1,321.16	980.24	0.00	21,617.81
PV SYSTEM.INVERTER 4	2,029.84	4,019.17	4,433.95	4,342.24	2,307.83	2,225.69	1,233.74	942.99	0.00	21,535.44
PV SYSTEM.INVERTER 5	1,301.35	2,352.24	2,584.83	2,625.51	1,579.12	1,885.80	1,279.63	1,023.57	0.00	14,672.06
PV SYSTEM.INVERTER 6	7,106.88	12,866.87	14,130.85	14,339.16	8,515.33	10,193.32	6,531.29	5,281.12	0.00	78,996.81
TOTAL	27,772.86	52,230.71	55,013.57	55,667.99	30,972.59	25,715.61	19,264.16	15,010.52	0.00	281,608.01

	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
SYSTEM.INVERTER 1 -	3,652.05	5,692.89	9,610.21	11,944.73	14,495.72	16,722.26	12,790.26	14,288.24	10,148.42	7,398.23	6,127.43	2,360.49	115,230.94
SYSTEM.INVERTER 2 -	3,610.07	5,561.94	9,641.33	12,584.14	14,630.18	16,725.64	12,633.07	13,790.98	9,776.19	599.11	0.00	1,524.32	101,076.99
SYSTEM.INVERTER 3 -	1,067.49	1,632.89	2,792.64	3,591.07	4,034.43	2,741.35	3,513.95	4,032.37	2,897.70	2,137.66	1,862.08	658.61	30,962.21
SYSTEM.INVERTER 4 -	987.38	1,506.62	2,683.79	3,587.64	4,061.72	4,627.94	3,549.62	4,070.14	2,867.79	2,011.08	1,732.70	623.76	32,310.18
SYSTEM.INVERTER 5 -	1,095.18	1,473.29	2,105.38	2,508.39	2,595.61	1,661.34	2,103.81	2,521.29	2,004.62	1,684.23	1,816.19	683.33	22,252.06
SYSTEM.INVERTER 6 -	5,751.13	7,881.55	11,150.72	13,710.05	14,259.38	15,422.14	13,426.74	13,774.18	10,857.12	7,963.59	9,639.21	3,591.56	127,427.36
SYSTEM.INVERTER 7 -	35.14	0.00	0.00	1,147.13	6,085.77	6,797.54	5,811.68	5,635.56	4,121.80	3,168.90	2,762.99	1,089.17	36,655.68
SYSTEM.INVERTER 8 -	11.26	0.00	0.00	767.80	4,506.75	5,015.07	3,834.09	4,190.66	3,047.04	2,303.83	1,931.41	766.01	26,373.92
SYSTEM.INVERTER 9 -	0.00	0.00	0.00	0.00	4,579.29	5,188.43	4,441.36	4,294.34	3,155.02	2,433.39	2,117.52	852.47	27,061.82
TOTAL	16,209.71	23,749.18	37,984.07	49,840.95	69,248.24	74,901.71	62,104.59	66,597.75	48,875.70	29,700.02	27,989.54	12,149.70	519,351.16

	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
SYSTEM.INVERTER_1	3,048.47	5,024.25	7,163.42	11,797.87	13,255.59	14,264.18	9,066.74	13,754.18	11,901.58	7,552.19	4,602.70	1,876.14	103,307.31
SYSTEM.INVERTER_2	2,836.76	4,686.91	6,787.66	11,294.14	12,651.00	13,614.76	8,793.01	13,414.99	11,650.91	7,366.48	4,457.55	1,764.02	99,318.20
SYSTEM.INVERTER_3	866.11	1,401.74	1,999.49	3,281.54	3,577.02	3,783.27	2,411.04	3,787.90	3,398.76	2,163.53	1,350.37	512.57	28,533.33
SYSTEM.INVERTER_4	803.92	1,290.19	1,930.25	3,298.40	3,586.21	3,814.89	2,453.75	3,869.97	3,397.90	2,047.92	1,275.42	494.60	28,263.41
SYSTEM.INVERTER_5	1,043.21	1,323.57	1,627.16	2,293.64	2,327.06	2,376.76	1,498.43	2,436.08	2,372.36	1,728.94	1,498.38	656.38	21,091.96
SYSTEM.INVERTER_6	5,955.54	7,269.66	9,072.30	12,607.69	12,911.33	13,263.95	8,342.94	13,461.13	12,955.99	9,466.23	7,436.94	3,485.56	116,229.26
SYSTEM.INVERTER_7	1,508.27	2,390.54	3,323.33	4,993.60	5,459.99	5,728.78	3,342.47	5,435.83	4,785.03	3,153.00	2,048.37	947.10	45,116.32
SYSTEM.INVERTER_8	1,002.71	1,707.06	2,425.36	3,699.80	4,057.75	4,254.84	3,948.85	4,009.62	3,480.35	2,270.28	1,410.38	618.39	32,885.38
SYSTEM.INVERTER_9	1,184.76	1,809.05	2,532.24	3,786.57	4,133.88	4,335.89	4,068.13	4,156.41	3,660.81	2,412.62	1,614.20	767.60	34,462.15
TOTAL	18,249.73	26,902.98	36,861.21	57,053.25	61,959.83	65,437.32	45,925.35	64,326.10	57,603.69	38,161.19	25,604.30	11,122.36	509,207.32

	January	February	March	April	TOTAL
PV_SYSTEM.INVERTER_1	2,755.91	3,443.92	8,702.98	5,843.05	20,745.86
PV_SYSTEM.INVERTER_2	1,896.56	3,022.69	8,573.76	5,780.55	19,273.55
PV_SYSTEM.INVERTER_3	501.60	969.05	2,497.85	1,656.72	5,625.22
PV_SYSTEM.INVERTER_4	431.18	869.00	2,371.87	1,616.51	5,288.56
PV_SYSTEM.INVERTER_5	893.06	1,093.16	2,117.34	1,178.55	5,282.10
PV_SYSTEM.INVERTER_6	4,784.93	6,230.86	11,718.79	6,475.50	29,210.09
PV_SYSTEM.INVERTER_7	1,586.67	1,709.40	4,192.85	2,496.35	9,985.27
PV_SYSTEM.INVERTER_8	950.90	1,134.15	2,840.20	1,825.69	6,750.93
PV_SYSTEM.INVERTER_9	1,328.20	1,403.48	3,341.49	1,915.76	7,988.93
TOTAL	15,129.01	19,875.71	46,357.12	28,788.68	110,150.53

Ohio | 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: 14-0772-EL-REN

Facility Name: Turkey Foot Middle School

Name of person making this affidavit: Christine L. Baker

State of KY
County of Kenton

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.

Christine Baker, Energy Systems Coordinator
Signature of Affiant & Title

Sworn and subscribed before me this 21 day of May, 2014 Month/Year

Erin Harlow
Notary

My commission expires on 4/9/17

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

5/21/2014 4:29:11 PM

in

Case No(s). 14-0772-EL-REN

Summary: Application Ohio renewable application electronically filed by Mrs. Chris Baker on behalf of Kenton County School District