Ohio | Public Utilities Commission

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

15-0442

Mercantile Customer:

Electric Utility: Duke Energy

Program Title or Description: Lighting Retrofit Project

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. 10-834-EL-POR

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application.

Any confidential or trade secret information may be submitted to Staff on disc or via email at ee-pdr@puc.state.oh.us.

Section 1: Mercantile Customer Information

Name: AK Steel Corporation

Principal address: 9227 Centre Point Drive West Chester, Ohio 45069

Address of facility for which this energy efficiency program applies:

AK Steel Middletown Works 1801 Crawford St. Middletown, Ohio 45043

Name and telephone number for responses to questions: Lucas Dixon, 614-580-3352

Electricity use by the customer (check the box(es) that apply):

- x The customer uses more than seven hundred thousand kilowatt hours per year at the above facility. (Please attach documentation.)
- □ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.)

Section 2: Application Information

A) The customer is filing this application (choose which applies):

- x Individually, without electric utility participation.
- □ Jointly with the electric utility.

B) The electric utility is: ___Duke Energy Corporation ___

C) The customer is offering to commit (check any that apply):

Energy savings from the customer's energy efficiency program. (Complete Sections 3, 5, 6, and 7.)

- □ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
- x Both the energy savings and the capacity savings from the customer's energy efficiency program. (Complete all sections of the Application.)

Section 3: Energy Efficiency Programs

A) The customer's energy efficiency program involves (check those that apply):

x Early replacement of fully functioning equipment, completed on 2/2/2015 with new equipment. (Provide the date on which the customer replaced fully functioning equipment, and the date on which the customer would have replaced such equipment if it had not been replaced early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known)). The customer would have replace equipment with like inefficient technology when it fails as the company has done for the last 20 years. Average life of a the lighting technology previously installed at AK Steel is 5-6 years, so for a newly installed fixture the expected replacement date would be March, 1 2019.

□ Installation of new equipment to replace equipment that needed to be replaced The customer installed new equipment on the following date(s): _____.

Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s): _Anticipated install date of _

□ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by the energy efficiency program:

1) If you checked the box indicating that the project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) - (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: 2,107,247 kWh

* Calculations provided in Addendum A1

2) If you checked the box indicating that the customer installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) - (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment.

3) If you checked the box indicating that the project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) - (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings:

Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment.

4) If you checked the box indicating that the project involves behavioral or operational improvements, provide a description of how the annual savings were determined.

Section 4: Demand Reduction/Demand Response Programs

A) The customer's program involves (check the one that applies):

x Coincident peak-demand savings from the customer's energy efficiency program.

□ Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)

□ Potential peak-demand reduction (check the one that applies):

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.

□ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.

B) On what date did the customer initiate its demand reduction program?
_February 2nd 2015.

C) What is the peak demand reduction achieved or capable of being achieved (show calculations through which this was determined):

___ 270.13

See Addendum D1- Wattage pre minus wattage post, times quantity of fixtures, divided by 1000.

Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)

Under this section, check the box that applies and fill in all blanks relating to that choice.

A) The customer is applying for:

□ Option 1: A cash rebate reasonable arrangement.

OR

X Option 2: An exemption from the energy efficiency cost recovery mechanism implemented by the electric utility.

OR

□ Commitment payment

B) The value of the option that the customer is seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

□ A cash rebate of $_____. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

Option 2: An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider.

X An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for 58 days (not to exceed 24 months). (Attach calculations showing how this time period was determined.) See Addendum A1 for rider exemption calculations.

OR

□ A commitment payment valued at no more than $_____. (Attach documentation and calculations showing how this payment amount was determined.)

OR

□ Ongoing exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for an initial period of 24 months because this program is part of the customer's ongoing efficiency program. (Attach documentation that establishes the ongoing nature of the program.) In order to continue the exemption beyond the initial 24 month period, the customer will need to provide a future application establishing additional energy savings and the continuance of the organization's energy efficiency program.)

Section 6: Cost Effectiveness

The program is cost effective because it has a benefit/cost ratio greater than 1 using the (choose which applies):

x Total Resource Cost (TRC) Test. The calculated TRC value is: __2.25_ (Continue to Subsection 1, then skip Subsection 2)

□ Utility Cost Test (UCT) . The calculated UCT value is: _____ (Skip to Subsection 2.)

Subsection 1: TRC Test Used (please fill in all blanks).

The TRC value of the program is calculated by dividing the value of our avoided supply costs (generation capacity, energy, and any transmission or distribution) by the sum of our program overhead and installation costs and any incremental measure costs paid by either the customer or the electric utility.

The electric utility's avoided supply costs were $709,720.78
Our program costs were _$315,297.00
The incremental measure costs will be $0
TRC Test Result 2.25

(Calculations in Addendum B1)

Subsection 2: UCT Used (please fill in all blanks).

We calculated the UCT value of our program by dividing the value of our avoided supply costs (capacity and energy) by the costs to our electric utility (including administrative costs and incentives paid or rider exemption costs) to obtain our commitment.

Our avoided supply costs were _____.

The utility's program costs were _____.

The utility's incentive costs/rebate costs were _____.

Section 7: Additional Information

Please attach the following supporting documentation to this application:

- Narrative description of the program including, but not limited to, make, model, and year of any installed and replaced equipment.
- A copy of the formal declaration or agreement that commits the program or measure to the electric utility, including:
  1) any confidentiality requirements associated with the agreement;
  2) a description of any consequences of noncompliance with the terms of the commitment;
  3) a description of coordination requirements between the customer and the electric utility with regard to peak demand reduction;
  4) permission by the customer to the electric utility and Commission staff and consultants to measure and verify energy savings and/or peak-demand reductions resulting from your program; and,
  5) a commitment by the customer to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.
- A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results. Additionally, identify and explain all deviations from any program measurement and verification guidelines that may be published by the Commission.

Ohio | Public Utilities Commission

Application to Commit Energy Efficiency/Peak Demand Reduction Programs (Mercantile Customers Only)

15-0442

State of Ohio :

LAWRENCE H. SCHUTTE, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

   AK Steel Corporation
   [insert customer or EDU company name and any applicable name(s) doing business as]

2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

FORM APPROVED ATTORNEY

Lawrence H. Schutte Corporate Manager of Energy Optimization

Signature of Affiant & Title

Sworn and subscribed before me this 27th day of Feb, 2015 Month/Year

Cindy Hamric

Signature of official administering oath

Cindy Hamric Notary Public State of Ohio My Commission Expires May 22, 2016

Print Name and Title

My commission expires on _____

Application to Commit
Energy Efficiency/Peak Demand
Reduction Programs

Addendum A1

Ak Steel previously used a mix of incandescent, quartz halogen, T12, 1000 and 400 watt Metal Halide and High Pressure sodium fixtures to light various exterior, production and production support buildings. The buildings lights run 24 or 12 hrs a day 365 days a year as activity persists in the plant 8760 hours a year. Plug Smart conducted an energy usage, replacement cost, and rider exemption value study of the building and determined that the economics are favorable for replacement of the lighting. Plug Smart designed and implemented a retrofit solution that provides the best energy savings to investment ratios.

Calculations:

Annual kWh Savings= 2,107,247 kWh annual savings

The average annual total electricity consumption for AK Steel Middletown Works over the past three years is 1,310,095.9 MWh. (2013-2011)

Total Usage for 2011 was 1,302,509 MWH
Total Usage for 2012 was 1,315,525 MWH
Total Usage for 2013 was 1,321,254 MWH

Since 1% annual reduction is required to offset the rider for the year 2015, the annual rider reduction requirement is: 0.01*1,310,096 MWh = 13,100,960 kWh.

This project will offset 2,107,247 kWh/13,100,960kWh= 16% of the annual rider requirement

365 days per year X 16%= 58 days of rider exemption

Addendum B1

Total Resource Cost Test (TRC) Calculations:

Annual Production: kWh	
Average kWh Rate:	$ 0.0421
Minimum Useful Life: years (Conservative)	8
Electric Utility's Lifetime avoided supply costs=	$709,720.78
Our program costs were:	$315,297.00
The incremental measure costs will be:	$0
Total Costs	$315,297.00
Total Resource Cost Test:	2.25
Calculations Explained:	
Savings x kWh Rate x minimum useful life= Electric utility's avoided supply costs	
Avoided Supply Costs/ (Program costs+ Incremental measure costs)= TRC Test	

Addendum C1: Timeline
This project was completed and placed in commercial operation on February 2nd, 2015.

Application to Commit
Energy Efficiency/Peak Demand
Reduction Programs

Addendum D1: See Project Specifications PDF

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

2/27/2015 4:44:47 PM

in

Case No(s). 15-0442-EL-EEC

Summary: Application to Commit Energy Efficiency/Peak Demand Reduction Programs of The Duke Corporation and The AK Steel Corporation to obtain an energy efficiency rider exemption for AK Steel electronically filed by Mr. Lucas M Dixon on behalf of Dixon , Lucas M Mr. and The AK Steel Corporation