



Legal Department

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
AEP.com

February 16, 2011

Chairman Steven Lesser
Public Utilities Commission of Ohio
180 East Broad Street
Columbus, OH 43215-3793

RE:

In the Matter of Buckeye Pipeline)
Company and Ohio Power Company)
for Approval of A Special)
Arrangement Agreement)
with a Mercantile Customer)

Case No. 11-1508-EL-EEC

Matthew J. Satterwhite
Senior Counsel –
Regulatory Services
(614) 716-1915 (P)
(614) 716-2014 (F)
mjsatterwhite@aep.com

Dear Chairman Lesser,

Attached please find the Joint Application of Ohio Power Company (OPCo) and mercantile customer Buckeye Pipeline Company for approval of a Special Arrangement of the commitment of energy efficiency/peak demand reduction (EE/PDR) resources toward compliance with the statutory benchmarks for 2011.

Amended Substitute Senate Bill 221 sets forth in R.C. 4928.66 EE/PDR benchmarks that electric distribution utilities shall be required to meet or exceed. The statute allows utilities to include EE/PDR resources committed by mercantile customers for integration into the utilities programs to be counted toward compliance with a utility’s EE/PDR benchmarks. The statute also enables the Commission to approve special arrangements for mercantile customers that commit EE/PDR resources to be counted toward compliance with EE/PDR benchmarks.

The Commission's Order in Case No. 10-834-EL-EEC, established a streamlined process to expedite review of these special arrangements by developing a sample application process for parties to follow for consideration of such programs implemented during the prior three calendar years. Attached is OPCo's version of that application and accompanying affidavit. Any confidential information referenced in the Joint Application has been filed in Commission Docket 10-1599-EL-EEC, under a request for protective treatment. OPCo respectfully requests that the Commission treat the two cases as associated dockets.

Cordially,

//s/ Matthew J. Satterwhite
Matthew J. Satterwhite, Senior Counsel

Attachments



Case No.: 11-1508-EL-EEC

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 implemented during the prior three calendar years.

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the 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 electric utilities' energy efficiency rider option (Option 2) will not qualify for the 60-day automatic approval.

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.

If you consider some of the items requested in the application to be confidential or trade secret information, please file a copy of the application under seal, along with a motion for protective order pertaining to the material you believe to be confidential. Please also file a copy of the application in the public docket, with the information you believe to be confidential redacted.

Section 1: Company Information

Name: BUCKEYE PIPE LINE COMPANY

Principal address: 9999 Hamilton Blvd, Breinigsville, Pa 18031

Address of facility for which this energy efficiency program applies: 3250 S Dixie Hwy, Lima, Oh 45804-3760

Name and telephone number for responses to questions:

Michael Kelly, Buckeye Pipe Line Company, (610) 904-4949

Electricity use by our company (at least one must apply to your company – check the box or boxes that apply):

- We use more than seven hundred thousand kilowatt hours per year at our facility. (Please attach documentation.)

See Confidential and Proprietary Attachment 4 - Calculation of Rider Exemption and UCT which provides the facility consumption for the last three years, benchmark kWh, and the last 12 months usage.

- We are part of a national account involving multiple facilities in one or more states. (Please attach documentation.) When checked, see Attachment 6 - Supporting Documentation for a listing of the customer's name and service addresses of other accounts in the AEP Ohio service territory.

Section 2: Application Information

A) We are filing this application (choose which applies):

- Individually, on our own.
- Jointly with our electric utility.

B) Our electric utility is: Ohio Power Company

The application to participate in the electric utility energy efficiency program is "Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application."

C) We are offering to commit (choose which applies):

- Energy savings from our energy efficiency program. (Complete Sections 3, 5, 6, and 7.)
- Demand reduction from our demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
- Both the energy savings and the demand reduction from our energy efficiency program. (Complete all sections of the Application.)

Section 3: Energy Efficiency Programs

A) Our energy efficiency program involves (choose whichever applies):

- Early replacement of fully functioning equipment with new equipment. (Provide the date on which you replaced your fully functioning equipment, and the date on which you would have replaced your equipment if you had not replaced it early. Please include a brief explanation for how you determined this future replacement date (or, if not known, please explain why this is not known)).
- Installation of new equipment to replace equipment that needed to be replaced. We installed our new equipment on the following date(s):
- Installation of new equipment for new construction or facility expansion. We installed our new equipment on the following date(s): 3/21/2009

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

- a) If you checked the box indicating that your 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: kWh

- b) If you checked the box indicating that you 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:

Annual savings: kWh

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

- c) If you checked the box indicating that your 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:

Unit Quantity (watts) = Existing (watts x units) - Installed (watts x units)

kWh Reduction (Annual Savings) = Unit Quantity x (Deemed kWh/Unit)

Annual savings: 1,415,653 kWh

See Confidential and Proprietary Attachment 5 – Self Direct Program Project Calculation for annual energy savings calculations and Attachment 6 – Supporting Documentation for custom measures work papers that provide all methodologies, protocols, and practices used in this application for custom measures, as needed.

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

The less efficient new equipment is the minimum required by Ohio State code or Federal Standard whichever is more stringent. For those measures where no code applies the baseline equipment is assumed to be the least efficient equipment available in the marketplace or standard practice, whichever results in the most conservative annual savings. Any information available describing the less efficient new equipment option is provided in Attachment 6 for the methodologies, protocols, and practices used in this application for custom measures.

Section 4: Demand Reduction/Demand Response Programs

A) Our program involves (choose which applies):

Coincident peak-demand savings from our energy efficiency program.

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

Potential peak-demand reduction (choose which applies):

➤ Choose one or more of the following that applies:

Our 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.

Our 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) What is the date your peak demand reduction program was initiated?

The coincident peak-demand savings are permanent installations that reduce demand through energy efficiency and were installed on the date specified in Section 3 A above.

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

Unit Quantity (watts) = Existing (watts x units) - Installed (watts x units)

KW Demand Reduction = Unit Quantity (watts) x (Deemed KW/Unit (watts))

.0 kW

See Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation for peak demand reduction calculation, and Attachment 6 - Supporting Documentation for custom measures work papers that provide all methodologies, protocols, and practices used in this application for custom measures, as needed.

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.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) We are applying for:

Option 1: A cash rebate reasonable arrangement.

OR

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

B) The value of the option that we are seeking is:

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

A cash rebate, based on avoided generation cost, of \$_____. (Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

OR

A cash rebate valued at no more than 50% of the total project cost, which is equal to \$ 84,939.18. (Attach documentation and calculations showing how this payment amount was determined.)

See Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation for incentive calculations for this mercantile program.

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

An exemption from payment of the electric utility's energy efficiency/peak demand reduction rider for ____ months (not to exceed 24 months). (Attach

calculations showing how this time period 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 an ongoing efficiency program that is practiced by our organization. (Attach documentation that establishes your organization's ongoing efficiency program. In order to continue the exemption beyond the initial 24 month period your organization 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):

- Total Resource Cost (TRC) Test. The calculated TRC value is: _____ (Continue to Subsection 1, then skip Subsection 2)
- Utility Cost Test (UCT) . The calculated UCT value is: 5.0 (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 (capacity and energy) by the sum of our program costs and our electric utility's administrative costs to implement the program.

Our avoided supply costs were _____.

Our program costs were _____.

The utility's administrative costs were _____.

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 \$ 468,492.32

The utility's administrative costs were \$ 8,493.92

The utility's incentive costs/rebate costs were \$ 84,939.18.

Section 7: Additional Information

Please attach the following supporting documentation to this application:

- Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment.

See Attachment 1 - Self Direct Project Overview and Commitment for a description of the project. See Attachment 6 - Supporting Documentation, for the specifications of the replacement equipment work papers that provide all methodologies, protocols, and practices used in this application for custom measures, as needed. Due to the length of time since the equipment replacement, the make, model and year of the replaced equipment is not available.

- A copy of the formal declaration or agreement that commits your program to the electric utility, including:

- 1) any confidentiality requirements associated with the agreement;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All confidentiality requirements are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.)

- 2) a description of any consequences of noncompliance with the terms of the commitment;

See Attachment 2 - Self Direct Program Project Blank Application including Rules and Requirements. All consequences of noncompliance are pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.

- 3) a description of coordination requirements between you and the electric utility with regard to peak demand reduction;

None required because the resources committed are permanent installations that reduce demand through increased efficiency during the Company's peak summer demand period generally defined as May through September and do not require specific coordination and communication to provide demand reduction capabilities to the Company.

- 4) permission by you 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,

See Attachment 2 - Self Direct Program Blank Application including Rules and Requirements granting such permission pursuant to the Retrospective Projects/Rules and Requirements that are part of the signed application which is provided as Confidential and Proprietary Attachment 3 - Self Direct Program Project Completed Application.

- 5) a commitment by you to provide an annual report on your energy savings and electric utility peak-demand reductions achieved.

See Attachment 1 - Self Direct Project Overview and Commitment for the commitment to comply with any information and compliance reporting requirements imposed by rule or as part of the approval of this arrangement by the Public Utilities Commission of Ohio.

- 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.

The Company applies the same methodologies, protocols, and practices to Self Direct Program retrospective projects that are screened and submitted for approval as it does to prospective projects submitted through its Prescriptive and Custom Programs. The Commission has not published a technical reference manual for use by the Company so deviations can not be identified. The project submitted is a custom project and energy savings are determined as described in Confidential and Proprietary Attachment 5 - Self Direct Program Project Calculation, Attachment 6 - Supporting Documentation for custom measures work papers that provide all methodologies, protocols, and practices used in this application for custom measures, as needed.



Public Utilities Commission

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

Case No.: 11-1508-EL-EEC

State of OHIO :

JEFFREY ROE, Affiant, being duly sworn according to law, deposes and says that:

- 1. I am the duly authorized representative of: KEMA Services, Inc agent of Ohio Power
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.
3. I am aware of fines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

Signature of Affiant & Title

Sworn and subscribed before me this 21st day of JANUARY, 2011 Month/Year

Signature of official administering oath

Kristin Elze, Notary Public
Print Name and Title

My commission expires on 10/11 Jun 14 2015



KRISTIN ELZE
Notary Public, State of Ohio
My Comm. Expires Jan. 14, 2015



Self Direct Project Overview & Commitment

The Public Utility Commission of Ohio (PUCO) will soon review your application for participation in AEP Ohio's Energy Efficiency/Peak Demand Response program. Based on your submitted project, please select by initialing one of the two options below, sign and fax to 877-607-0740.

Customer Name	BUCKEYE PIPE LINE COMPANY	
Project Number	AEP-10-02522	
Customer Premise Address	3250 S DIXIE HWY, LIMA, OH 45804-3760	
Customer Mailing Address	9999 Hamilton Blvd, Breinigsville, PA 18031	
Date Received	12/13/2010	
Project Installation Date	3/21/2009	
Annual kWh Reduction	1,415,653	
Total Project Cost	\$281,028.00	
Unadjusted Energy Efficiency Credit (EEC) Calculation	\$113,252.24	
Simple Payback (yrs)	2.6	
Utility Cost Test (UCT)	5.0	
<i>Please Choose One Option Below and Initial</i>		
Option 1 - Self Direct EEC: 75%	\$84,939.18	<input checked="" type="checkbox"/> Initial: <i>[Signature]</i>
Option 2 - EE/PDR Rider Exemption	98 Months (After PUCO Approval)	<input type="checkbox"/> Initial:

Note: This is a one time selection. By selecting Option 1, the customer will receive payment in the amount stated above. Selection of Option 2: EE/PDR rider exemption, will result in the customer not being eligible to participate in any other energy efficiency programs offered by AEP Ohio during the period of exemption. In addition, the term of Option 2: EE/PDR rider exemption is subject to ongoing review for compliance and could be changed by the PUCO.

If Option 1 has been selected, will the Energy Efficiency Funds selected help you move forward with other energy efficiency projects?
 _____ YES _____ NO

Project Overview:

The Self Direct (Custom) project that the above has completed and applied is as follows.

Buckeye Pipeline installed a 2500 HP VFD on a pump that would traditionally use a flow limiter/pressure limiter valve. This VFD saves an estimated 1,415,643 kWh per year.

The newly installed pump system on the existing pipeline utilizes an energy efficient measure to control flow and pressure in the pipeline compared with what would be standard practice.

Standard practice for controlling operating pressures and flows is the utilization of a pressure reducing valve (PRV) in series with a pump/motor set operating at full speed. Buckeye Pipeline elected to install a variable speed drive (VFD) to control pump/motor speed which controls product pressures and flows. This saves a significant amount of energy, but is much more expensive than the PRV. For payback analysis, the cost of the VFD alone is used as the incremental cost.

The documentation that was included with the application proved that the energy measures applied for were purchased and installed.

By signing this document, the Mercantile customer affirms its intention to commit and integrate the above listed energy efficiency resources into the utility's peak demand reduction, demand response, and energy efficiency programs. By signing, the Mercantile customer also agrees to serve as a joint applicant in any filings necessary to secure approval of this arrangement by the Public Utilities Commission of Ohio, and comply with any information and compliance reporting requirements imposed by rule or as part of that approval.

Ohio Power Company

By: *[Signature]*
 Title: Manager
 Date: 1/17/2011

BUCKEYE PIPE LINE COMPANY

By: *[Signature]*
 Title: Power Program Leader
 Date: 1-17-11



Self-Direct Program Project Application

Jan 2010 - Dec 2010

Step 1: Check Project and Equipment Eligibility

- ✓ Project must be a facility improvement that results in a *permanent* reduction in electrical energy usage (kWh).
- ✓ All installed equipment must meet or exceed the specifications given in the application and be installed in facilities served by AEP Ohio: Customer must have a valid AEP Ohio account number on an eligible AEP Ohio non-residential rate (see terms and conditions for list of eligible rates).

Step 2: Submit Application

- ✓ Fill out the Customer Information form and the Worksheet for the measures that you are installing. You may submit the application via mail, fax or e-mail.

Submit your application to:

AEP Ohio gridSMART Program
6031 East Main St. Suite 190
Columbus, OH 43213
Call: (877)-607-0739
Fax: (877)-607-0740
Email: gridsmartohio@kema.com
Visit our web site at gridsmartohio.com

- ✓ Submit an application prior to December 15, 2010. Complete the checklist page and attach the documentation listed: a signed Agreement and Signature page, a scope of work (type, quantity and wattage of old and new equipment), dated, itemized invoices for the purchase and installation of all equipment installed and specification sheets for all equipment installed showing that it meets the program specifications.

Step 3: Project Review

- ✓ The program team will review your Application. For some projects, an inspection will be part of the review, and you will be contacted to schedule it.
- ✓ After approval by AEP Ohio self-direct projects are submitted to the Public Utilities Commission of Ohio (PUCO) for consideration. The PUCO will assign a case number and review the project details that were prepared by AEP Ohio. After the commission reviews the project the case will be put on the docket for a formal meeting, where action is taken to approve or reject the project for energy efficiency credits.

Step 4: Receive Energy Efficiency Credits

- ✓ The program team will issue the energy efficiency credits, within four to six weeks after PUCO project approval.
- ✓ In lieu of a one-time energy efficiency credit, you may elect to seek an exemption from the Energy Efficiency / Peak Demand Reduction (EE/ PDR) Rider for the associated electric accounts(s) for a defined period of time as stated on this Application. For this exemption the Energy Efficiency Credit amount (Option 1) is compared to the estimated value of the estimated EE/PDR Rider obligation (Option 2), as calculated by AEP Ohio. The value of Option 2 will be approximately equal to the value of Option 1. If exemption is elected, you are not eligible for other programs offered by AEP Ohio during the exemption period. Unless additional resources are committed, you will, after the specified number of months exempted, be subject to the EE/ PDR Rider.
- ✓ If the energy efficiency credit is elected, you remain in the EE/ PDR rider for the period of time that an exemption would have been in effect and may also participate in the AEP Ohio programs.
- ✓ You are allowed and encouraged to consider using all or a portion of the energy credits, as received from AEP Ohio under this program, to help fund other energy efficiency and demand reduction projects you choose to initiate in the future. Future projects can also qualify for credits under the Prescriptive or Custom programs.

If you are viewing this document in Microsoft Excel, please note that each section of the application is accessible through the tabs at the bottom of the Excel window.



APPLICATION CHECKLIST

APPLICATION	
Required Attachments	
<input type="checkbox"/>	Customer/Contractor Information
<input type="checkbox"/>	Completed Energy Efficiency Credits Requested Section of Agreement and Signature Page
<input type="checkbox"/>	Completed Payment Release Section of Agreement and Signature Page (if applicable)
<input type="checkbox"/>	Itemized Invoices
<input type="checkbox"/>	Equipment Specifications
<input type="checkbox"/>	Updated scope if project changed
Worksheets	
<input type="checkbox"/>	Lighting
<input type="checkbox"/>	HVAC
<input type="checkbox"/>	Refrigeration
<input type="checkbox"/>	Motors and VFD
<input type="checkbox"/>	Custom
Application Date:	_____
Completion Date:	_____
<i>*Incomplete applications will delay processing and energy efficiency credits. **Please complete forms for above checked boxes</i>	

Please fill out if this is a revised submittal

SUBMITTAL DATE: _____
APPLICATION NUMBER (IF KNOWN): _____

**AEP Ohio gridSMART Program
6031 East Main St. Suite 190
Columbus, OH 43213**

Phone: (877)-807-0739
Fax: (877)-807-0740
gridsmartohio@kema.com
www.gridsmartohio.com



Self-Direct Program Project Application

TERMS AND CONDITIONS

Columbus Southern Power and Ohio Power Company are collectively known as AEP Ohio (AEP Ohio). AEP Ohio is offering Prescriptive and Custom energy efficiency credits under the AEP Ohio gridSMARTSM program to facilitate the implementation of past cost-effective energy-efficiency improvements for non-residential (commercial and industrial) customers. AEP Ohio provides energy efficiency credits (EEC) for the purchase and installation of qualifying cost effective equipment in the customer's facility (the Customer's "Commitment of Resources") under the Rules and Requirements provided in this application and subject to regulatory approvals. Energy efficiency credits will only be provided in the form of a check or an Energy Efficiency/Peak Demand Reduction (EE/PDR) Rider exemption under this program.

All applications are subject to review and approval by AEP Ohio, its contractor(s)/agent(s), and the Public Utility Commission of Ohio (PUCO) prior to any ECC payments or exemptions from the EE/PDR rider in this program. Funds are limited and subject to availability.

Program Effective Dates

gridSMART energy efficiency credits are offered until approved funds are exhausted or Dec 31 of each program year, whichever comes first. The effective dates of Year 2 of the gridSMART program and application submittal requirements are as follows:

- Self-direct projects are retrospective projects completed since 1/1/2007. Self-direct projects are eligible to apply for energy efficiency credits with this application. Future projects that are not yet completed should apply on the Prescriptive/Custom application.
- All 2010 gridSMART program Applications must be received no later than Dec 15, 2010.
- Subsequent program year plans will be made available toward the end of the existing program year. At the current time, AEP Ohio has a commitment to provide this program through the 2010 program year.

Program and Project Eligibility

The Self-Direct Program applies to customers served at AEP Ohio's retail electric rates who meet the minimum energy usage requirements of 700,000 kWh per year or who are part of a national account involving multiple facilities in one or more states.

The gridSMART program offers both Prescriptive energy efficiency credits for some of the more common energy efficiency measures and Custom energy efficiency credits for those eligible improvements not included on the list of Prescriptive measures. Program credits are available under the gridSMART program to non-residential customers served at AEP Ohio's regulated retail rates, where qualifying projects are installed in a facility in AEP Ohio's electric service territory. These credits are available to all non residential customers who pay into the Energy Efficiency and Peak Demand Response (EE/PDR) rider and receive their electricity over AEP Ohio wires, regardless of which retail electric supplier the customer has chosen to purchase power from.

Custom projects must involve measures that result in a reduction in electric energy usage due to an improvement in system efficiency. Projects that result in reduced energy consumption without an improvement in system efficiency are not eligible for a Custom credit. However, projects that involve an automated control technology such as energy management system programming may be eligible for a credit. All projects must meet AEP Ohio's cost-effectiveness requirements. The project simple payback prior to the credit must be greater than one year and pass utility cost effectiveness test(s) determined by AEP Ohio, to qualify for credit. The peak demand hours are defined as weekdays, 7:00 AM to 9:00 PM, May through September.

Projects involving measures covered by the Prescriptive energy efficiency credit portion of the program are not eligible for a Custom energy efficiency credit. However, the applicant has the option to apply for a Custom energy efficiency credit for whole building integrated projects or systems even if they include Prescriptive measures.

The energy efficiency credits are calculated in the following Prescriptive or Custom worksheets.



TERMS AND CONDITIONS

Project requirements under the AEP Ohio gridSMART program include the following:

- Projects must involve a facility improvement that results in a permanent reduction in electrical energy usage (kWh)
- Projects that are NOT eligible for a credit include the following:
 - Fuel switching (e.g. electric to gas or gas to electric)
 - Changes in operational and/or maintenance practices or simple control modifications not involving capital costs
 - Removal or termination of existing processes, facilities, and/or operations
 - On-site electricity generation
 - Projects involving gas-driven equipment in place of or to replace electric equipment (such as a chiller)
 - Projects focused primarily on power factor improvement;
 - Projects that involve peak-shifting (and not kWh savings)
 - Renewables
 - Are required by state or federal law, building or other codes, or are standard industry practice
 - Are easily reverted/removed or are installed entirely for reasons other than improving energy efficiency
 - Include other conditions to be determined by AEP Ohio.
- Any measures installed at a facility must produce verifiable and persistent energy reduction. Measures must be sustainable and provide 100% of the energy benefits as stated in the Application for a period of at least five (5) years or for the life of the product, whichever is less. If the Customer ceases to be a delivery service customer of AEP Ohio or removes the equipment or systems at any time during the 5-year period or the life of the product, the Customer may be required to return a prorated amount of credit funds to AEP Ohio.
- Customer can not apply for incentives for future projects and elect after the fact to apply for credits under this program.
- All documentation and verification is subject to strict confidentiality.
- All equipment must be new; used or rebuilt equipment is NOT eligible for energy efficiency credits
- All installed equipment must meet state, federal, or local codes and requirements
- Costs associated with internal labor are not eligible.
- Projects must be installed on the AEP Ohio electric account listed on the application
- Equipment must be purchased, installed, and operating (or capable of operating in the case of seasonal uses) prior to submitting an application for energy efficiency credits
- The energy efficiency credits are paid as a one-time, one-program offer and cannot be combined with incentive payments from other AEP Ohio programs. The customer may be eligible to participate in other programs offered by AEP Ohio, as long as no project receives more than one incentive/credit.

PROGRAM INCENTIVES	
Energy efficiency credit levels for one-year energy savings	\$0.08/kWh x 75%
Minimum / Maximum simple payback before energy efficiency credit applied	1 year Min / 7 year Max Or pass cost effectiveness test(s) (determined by AEP Ohio)
Maximum payout	50% of total project cost (additional caps may also apply)
Energy efficiency credit levels for retrospective projects completed since 1/1/2007	Calculated amount on the Prescriptive or Custom worksheets attached and subject to funding limits



Self-Direct Program Project Application

TERMS AND CONDITIONS

Energy Efficiency Credit Limits

For both the Prescriptive and Custom measures in this application, the total energy efficiency credits shall be 75% of the lesser of: 1) The calculated credit as approved by AEP Ohio, or 2) 50% of the project cost with larger projects subject to the following limits and credit reductions. In calculating the savings and energy efficiency credits for Custom measures please contact the gridSMART office to determine appropriate baseline for savings.

Funding is limited

- The limit for each self-direct project is \$225,000.
- The limit for each business entity (corporation, LLC, partnership, etc) in the Self-Direct Program is based on their tariff, as indicated below:

TARIFF	LIMIT PER BUSINESS ENTITY
General Service Tariffs 1, 2, & 3	\$450,000 per year
Any Other Tariff	\$450,000 overall for years 2009-2011

- A sliding scale credit reduction will be incorporated when the calculated energy efficiency credits exceed \$160,000 per project.

Application

Applications must be submitted by December 15, 2010. Project documentation, such as copies of dated invoices for the purchase and installation of the measures and/or product specification sheets, is required. AEP Ohio reserves the right to request additional backup information, supporting detail, calculations, manufacturer specification sheets or any other information prior to any credit payment.

The location or business name on the invoice must be consistent with the application information. Applications and all required supporting documentation should be received by Dec 15, 2010, to be applicable for the 2010 program year.

A signed application with documentation verifying installation of the project including, but not limited to, equipment, invoices, approvals, and other related information must be submitted to AEP Ohio prior to application approval.

The project invoice should provide sufficient detail to separate the project cost from the cost of other services such as repairs and building code compliance. AEP Ohio reserves the right to request additional supporting documentation as deemed necessary to ensure measure eligibility and verify that the expected energy savings will occur. All customer information will be held in confidence. Requested information could include: equipment purchase dates, installation dates, proof that the equipment is operational, manufacturer specifications, warranty information, and proof of customer co-payment.

The customer understands and agrees that all other terms and conditions, as specified in the application, including all attachments and exhibits attached to this application, which will serve as a contract for the customer's commitment of energy resources to AEP Ohio, shall apply.

Application Review Process

AEP Ohio will review Applications for eligibility and completeness. Completed applications will be reviewed in the order received. Funds are reserved for the project when AEP Ohio receives a complete application and determines that the project meets the program eligibility requirements. Applicants who submit incomplete applications will be notified of deficiencies upon review of the application, and could lose their place in line in the review process until all requested information is received. Applicants are encouraged to call the program hotline if they have any questions about documentation requirements.



Self-Direct Program Project Application

TERMS AND CONDITIONS

Inspections

AEP Ohio reserves the right to inspect all projects to verify compliance with the program rules and verify the accuracy of project documentation. This may include installation inspections, detailed lighting layout descriptions, metering, data collection, interviews, and utility bill data analysis. The customer must allow access to project documents and the facility where the measures were installed for a period of five years after receipt of energy efficiency credits by AEP Ohio. Customer understands and agrees that Program installations may also be subject to inspections by the PUCO or their designee, and photographs of installation may be required. All documentation and verification is subject to strict confidentiality.

Requirements for Custom Project Electricity Savings Calculation

The annual electricity savings must be calculated for Custom projects using industry accepted engineering algorithms or simulation models. The applicant must estimate the annual electricity usage of both the equipment removed (and baseline) and equipment installed based on the current operation of the facility. If the previous equipment was at the end of its useful life, the applicant must use as the baseline, the equipment that would meet the applicable federal and local energy codes when calculating the annual energy savings.

The applicant must be able to clearly describe the method used to calculate the savings. The applicant must provide all assumptions used in the calculations and document the source for these assumptions.

The method and assumptions used by the applicant to calculate the annual savings will be reviewed by AEP Ohio. AEP Ohio is solely responsible for the final determination of the annual energy savings to be used in calculating the energy efficiency credit amount. AEP Ohio also reserves the right to require specific measurement and verification activities including monitoring the retrofit and to determine the credit. Verification of the preexisting consumption may also be required.

AEP Ohio may need to conduct inspections both before and after the retrofit projects to verify equipment and operation conditions. For Custom projects, the applicant is required to provide information in order to allow AEP Ohio to verify the baseline usage of the pre-existing equipment.

Customers are encouraged to submit projects that warrant special treatment (i.e., non-typical projects) to be considered on a case-by-case basis by AEP Ohio.

Tax Liability

Credits are taxable and, if more than \$600, will be reported to the IRS unless the customer is exempt. AEP Ohio is not responsible for any taxes that may be imposed on your business as a result of your receipt of the energy efficiency credits.

Disclaimer

AEP Ohio does not guarantee the energy savings and does not make any warranties associated with the measures eligible for energy efficiency credits under this program. AEP Ohio has no obligations regarding and does not endorse or guarantee any claims, promises, work, or equipment made, performed, or furnished by any contractors or equipment vendors or manufacturers that sell or install any energy efficiency measures. AEP Ohio is not responsible for the proper disposal/recycling of any waste generated as a result of this project. AEP Ohio is not liable for any damage caused by the operation or malfunction of the installed equipment.

gridSMART
From **AEP OHIO**

**Self-Direct Program
Project Application**

Important: Please read the terms and conditions before signing and submitting this application.
You must complete all information and provide required additional documentation to avoid processing delays.

CUSTOMER INFORMATION

Primary Business Type (select one)

- | | |
|-----------------------------------------|-----------------------------------------------|
| OFFICE <input type="checkbox"/> | WAREHOUSE <input type="checkbox"/> |
| SCHOOL <input type="checkbox"/> | LIGHT INDUSTRY <input type="checkbox"/> |
| RETAIL/SERVICE <input type="checkbox"/> | HEAVY INDUSTRY <input type="checkbox"/> |
| RESTAURANT <input type="checkbox"/> | MISCELLANEOUS <input type="checkbox"/> |
| HOTEL/MOTEL <input type="checkbox"/> | OTHER <input type="checkbox"/> |
| MEDICAL <input type="checkbox"/> | COLLEGE/UNIVERSITY <input type="checkbox"/> |
| GROCERY <input type="checkbox"/> | GOVERNMENT/MUNICIPAL <input type="checkbox"/> |

Tax Status (as entered on W9)

- Corporation (Inc., PC, Etc.)
- Tax Exempt
- Individual
- Other (may receive 1099) _____
(describe other)

Please indicate which category best describes the current operating hours affected of the facility affected by this project.

- Three shifts (24h / day)
- Two shifts (16h / day)
- One shift (8h / day)

Project Type

- Retrofit
- New Construction

SQUARE FOOTAGE OF BUILDING(S) AFFECTED BY THIS PROJECT _____

NAME OF APPLICANT'S BUSINESS		PROJECT NAME (IF APPLICABLE)		
NAME AS IT APPEARS ON UTILITY BILL	ACCT #*	APPLICANT TAXPAYER ID # (SSN/FEIN)		
MAILING ADDRESS		CITY	STATE	ZIP
INSTALLATION ADDRESS		CITY	STATE	ZIP

As an eligible customer, I verify the information is correct and request consideration for participation under this program.

CUSTOMER SIGNATURE (AEP CUSTOMER)	PRINT NAME
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<input type="checkbox"/>	TOTAL ENERGY EFFICIENCY CREDITS REQUESTED**	DATE
	COMPLETION DATE	PROJECT COST (Internal labor costs are not eligible)

CUSTOMER CONTACTS

Please provide all contacts we may need to process for this project. The business contact should be the project decision maker.

NAME OF CONTACT PERSON - Preferred Contact for Documentation			TYPE OF CONTACT (BUSINESS, TECHNICAL, ADMINISTRATIVE)
CONTACT PHONE #	EXTENSION	CONTACT FAX #	CONTACT EMAIL ADDRESS
NAME OF CONTACT PERSON			TYPE OF CONTACT (BUSINESS, TECHNICAL, ADMINISTRATIVE)
CONTACT PHONE #	EXTENSION	CONTACT FAX #	CONTACT EMAIL ADDRESS
NAME OF CONTACT PERSON			TYPE OF CONTACT (BUSINESS, TECHNICAL, ADMINISTRATIVE)
CONTACT PHONE #	EXTENSION	CONTACT FAX #	CONTACT EMAIL ADDRESS
NAME OF CONTACT PERSON			TYPE OF CONTACT (BUSINESS, TECHNICAL, ADMINISTRATIVE)
CONTACT PHONE #	EXTENSION	CONTACT FAX #	CONTACT EMAIL ADDRESS

CONTRACTOR INFORMATION

NAME OF CONTRACTING COMPANY			
NAME OF CONTACT PERSON			TITLE OF CONTACT PERSON
CONTACT PHONE #	EXTENSION	CONTACT FAX #	CONTACT EMAIL ADDRESS
MAILING ADDRESS			CITY STATE ZIP

* AEP Ohio Account Number where measure is installed
** Energy efficiency credits cannot exceed 50 percent of the total project



Self-Direct Program Project Application

SELF-DIRECT APPLICATION AGREEMENT

As an eligible AEP Ohio customer, I certify that the installation of the indicated energy efficiency measures, which will be demonstrated with supporting documentation required by AEP Ohio, and that work was completed on this project on or after Jan 1, 2007. The energy efficiency measures are for use on-site and not for resale. Project documentation, including copies of dated invoices for the purchase and installation of the measures and product specification sheets, is required. Further documentation requirements can be found at the program website www.gridsmartohio.com or by calling the program hotline.

I understand that the location or business name on the invoice must be consistent with the application information. Final Applications and all required supporting documentation should be received by Dec 15, 2010.

I agree to verification by the utility or their representatives of both sales transactions and equipment installation.

I understand that these energy efficiency credits are available to all eligible customers who pay the Energy Efficiency and Demand Response (EE/PDR) rider and receive their electricity over AEP Ohio wires regardless of which retail electric supplier the customer has chosen to purchase power from.

I certify that the information on this application is true and correct, and that the Taxpayer ID Number and tax status is the applicant's. I understand that incentives over \$600 will be reported to the IRS unless the applicant is exempt. I understand that energy efficiency credits assume related energy benefits over a period of 5 years or for the life of the product, whichever is less.

I agree that if: I remove the related product(s) identified in my application before a period of 5 years or the end of the product life, whichever is less, then I shall refund a prorated amount of energy efficiency credits to AEP Ohio based on the actual period of time in which the related product(s) were installed and operating. This is necessary to assure that the project's related energy benefits will be achieved.

I understand that the program may be modified or terminated without prior notice.

AEP Ohio reserves the right to refuse payment and participation if the customer or contractor violates Program rules and requirements. AEP Ohio is not liable for energy efficiency credits promised to customers as a result of misrepresentation of the Program.

Customer and customer's contractor shall be responsible to comply with any applicable codes or ordinances.

All submissions become the property of AEP Ohio. Keep a copy for your records.

I understand that the Application and all required documentation must be received by the AEP Ohio gridSMARTSM program prior to December 15, 2010. All equipment must be fully operational.

I understand that this project must involve a facility improvement that results in improved energy efficiency. I also understand that all materials removed, including lamps and PCB ballasts, must be permanently taken out of service and disposed of in accordance with local codes and ordinances. I understand it is my responsibility to be aware of any applicable codes or ordinances. Information about hazardous waste disposal can be found at: <http://www.epa.gov/osw/hazwaste.htm>.

AEP Ohio will pay 75% of the lesser of: 1) The calculated credit as approved by AEP Ohio subject to funding limits or 2) 50% of the total project cost (subject to application caps). I understand that AEP Ohio or their representatives have the right to ask for additional information at any time. AEP Ohio's gridSMART program will make the final determination of energy efficiency credit levels for this project.

The program has a limited budget. Applications will be processed within the budget limits. Applications and all supporting documentation required should be received by Dec 15, 2010 to be eligible for funding under the current program period.

Customer understands and agrees that all other terms and conditions, as specified in the application, including all attachments and exhibits attached to this application which will serve as a contract for the Customer's commitment of energy and demand resources to AEP Ohio shall apply.



Self-Direct Program Project Application

SELF-DIRECT APPLICATION AGREEMENT

I understand that AEP Ohio does not guarantee the energy savings and does not make any warranties associated with the measures eligible for energy efficiency credits under this program, and, further, that AEP Ohio has no obligations regarding and does not endorse or guarantee any claims, promises, work, or equipment made, performed, or furnished by any contractors or equipment vendors that sell or install any energy efficiency measures. Energy efficiency credits will be based upon the final application and program terms and conditions, as well as the availability of funds.

Any and all energy savings or environmental credits generated by the project described in this application will be retained by AEP Ohio.

ENERGY EFFICIENCY CREDITS REQUESTED

TOTAL PROJECT COST	TOTAL ENERGY EFFICIENCY CREDITS REQUESTED
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CUSTOMER SIGNATURE (AEP CUSTOMER)



PRINT NAME	DATE	ACTUAL COMPLETION DATE
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I have read and understand the program requirements and Measure Specifications and Terms and Conditions set forth in this application and agree to abide by those requirements. Furthermore, I concur that I must meet all eligibility criteria in order to be paid under this program.

ALL EQUIPMENT MUST BE INSTALLED AND OPERATIONAL. A CUSTOMER SIGNATURE IS REQUIRED. SIGNED APPLICATIONS RECEIVED BY FAX OR EMAIL WILL BE TREATED THE SAME AS ORIGINAL APPLICATIONS RECEIVED BY MAIL. All submissions become the property of AEP Ohio. Keep a copy for your records.

PAYMENT RELEASE AUTHORIZATION (OPTIONAL)

Complete this section *ONLY* if energy efficiency credits will be provided to an entity other than the AEP Ohio customer listed on the Applicant Information page.

I am authorizing the third party named below to receive my energy efficiency credits and I understand that I will not be receiving the energy efficiency credits from AEP Ohio. I also understand that my release of the payment to a third party does not exempt me from the program requirements outlined in the measure specifications and Terms & Conditions.

Authorized by:

CUSTOMER SIGNATURE (AEP Ohio CUSTOMER)	PRINT NAME	DATE
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Check should be made payable to:

PAYEE: COMPANY/INDIVIDUAL NAME

MAILING ADDRESS

CITY	STATE	ZIP
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CONTACT PHONE NUMBER

TAXPAYER ID # (SSN/FEIN OF PAYEE)	TAX STATUS Corporation (Inc., PC, Etc.), Tax Exempt, Individual, Other (May receive 1099)
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The newly installed pump system on the existing pipeline utilizes an energy efficient measure to control flow and pressure in the pipeline compared with what would be standard practice.

Standard practice for controlling operating pressures and flows is the utilization of a pressure reducing valve (PRV) in series with a pump/motor set operating at full speed. Buckeye Pipeline elected to install a variable speed drive (VFD) to control pump/motor speed which controls product pressures and flows. This saves a significant amount of energy, but is much more expensive than the PRV. For payback analysis, the cost of the VFD alone is used as the incremental cost.

Pump system with traditional flow limiter valve	4,835,414	
Total kWh Base		4,835,414
Pump system with VFD on motor replacing flow valve	3,419,761	
Total kWh with EEM		3,419,761
kWh Reduced		1,415,653
		\$ 113,252.24
\$0.08 Normal Incentive for kWh Reduction		
Incremental Project cost is cost of VFD		\$315,122.18
Total Credits before 75% Factor for Self Direct		\$ 113,252.24
Minimum of 50% of Incremental Cost or Credits		\$ 113,252.24
Energy Efficiency Credits Authorized		\$ 84,939.18

Calculation Methodology for AEP-10-02522 Buckeye Pipeline:

Buckeye Pipeline installed an energy efficient measure on a long distance petrochemical pipeline. The energy efficient measure falls into the general category of “process variable frequency drive.”

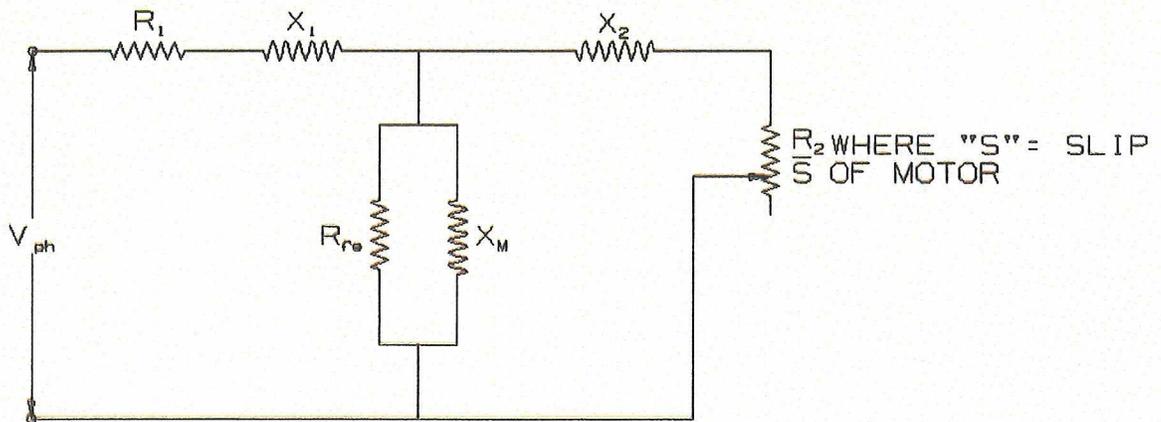
Standard practice for controlling operating pressures and flows is the utilization of a pressure reducing valve (PRV) in series with a pump/motor set operating at full speed. Buckeye Pipeline elected to install a variable speed drive (VFD) to control pump/motor speed which controls product pressures and flows. This saves a significant amount of energy, but is much more expensive than the PRV. For payback analysis, the cost of the VFD alone is used as the incremental cost.

Siemens Energy & Automation, Inc. Norwood, Ohio

Induction Motor Data

Customer LONGO INDUSTRIES
 Serial Number 3000606036-000010
 Customer Order 08N110A

Equivalent Circuit Parameters for Polyphase Induction Motors



	Rated RPM	Stalled
R_1	0.04809	0.04809
X_1	0.9077	0.9077
R_2	0.03483	0.11718
X_2	0.67668	0.48666
X_M	30.7066	
R_{re}	1094.73	

Note : Equivalent circuit parameters based on equivalent wye circuit.

Date: 12/26/2006

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Commission of Ohio Docketing Information System on

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in

Case No(s). 11-1508-EL-EEC

Summary: Application Joint Application electronically filed by Mr. Matthew J Satterwhite on behalf of American Electric Power Service Corporation