Ohio | Public Utilities Commission

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

Case No.: 13-0102-EL-EEC

Mercantile Customer:	Foseco, a division of Vesuvius USA Corp
Electric Utility:	The Cleveland Electric Illuminating Company
Program Title or Description:	Plant Main Air Compressor Replacement

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:Foseco, a division of Vesuvius USA Corp.

Principal address:20200 Sheldon Road, Brook Park, OHIO, 44142

Address of facility for which this energy efficiency program applies:20200 Sheldon Road, Brook Park, OHIO, 44142

Name and telephone number for responses to questions:Kirk Garrett, (440)863-2705

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

- ☒ 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):

- ☐ Individually, without electric utility participation.
- ☒ Jointly with the electric utility.

B) The electric utility is: The Cleveland Electric Illuminating Company

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.)
- ☐ 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):

☒ Early replacement of fully functioning equipment 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)). **If Checked, Please see Exhibit 1 and Exhibit 2**

☐ 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):

_____.

☐ 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: _____ kWh

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:

Annual savings: _____ kWh

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment. **Please see Exhibit 1 if applicable**

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: 520,000 kWh

Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment. **Please see Exhibit 1 if applicable**

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):

☒ 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?

04/30/2009

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

not calculated kW

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) The customer is applying for:

☒ Option 1: A cash rebate reasonable arrangement.

OR

☐ 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 $31,200. (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.

☐ 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

☐ 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):

☐ 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: **See Exhibit 3** (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 _____.

Our program costs were _____.

The incremental measure 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 **See Exhibit 3**

The utility's program costs were **See Exhibit 3**

The utility's incentive costs/rebate costs were **See Exhibit 3**

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)

13-0102

Case No.: ~~12-3270-~~EL-EEC

State of Ohio :

Kirk Garrett, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

   Foseco, a division of Vesuvius USA Corp.
   [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.

Operations Manager
Signature of Affiant & Title

Sworn and subscribed before me this 28th day of December, 2012 Month/Year

Mary Ellen Wagner
Signature of official administering oath

Mary Ellen Wagner; Notary Public
Print Name and Title

My commission expires on 4/23/2017

NOTARIAL SEAL STATE OF OHIO
MARY ELLEN WAGNER
NOTARY PUBLIC
STATE OF OHIO
Recorded in
Cuyahoga County
My Comm. Exp. 4/23/17

Exhibit 1

Customer Legal Entity Name: Foseco, a Division of Vesuvius USA Corp

Site Address: Foseco-CD

Principal Address: 20200 Sheldon Road

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Plant Compressed Air System Upgrade 2008	See Project 1 Info Attachement (13-0102-EL_EEC) - Narrative Description	The air/energy audits were taken using data logging devices and measuring the flow rates in the two main header pipes from our Central comperssor system. This data was logged at the same time as the motor Kw & time durations were logged for each compressor. The data was plotted and calculated by CascoUSA Company, an independent contractor. Attached is the comparing summary of before and after project improvements. (see System Savings.pdf) FOLLOW UP SURVEY OF COMPRESSED AIR SYSTEM PERFORMANCE	2 years; based age of equipment	N/A

Exhibit 2

Customer Legal Entity Name: Foseco, a Division of Vesuvius USA Corp
Site Address: Foseco-CD
Principal Address: 20200 Sheldon Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) *Note 1*
2011	10,122,776	10,122,776	10,642,776
2010	9,133,381	9,133,381	9,653,381
2009	7,216,323	7,216,323	7,566,789
Average	**8,824,160**	**8,824,160**	**9,287,649**

Project Number	Project Name	In-Service Date	Project Cost $	50% of Project Cost $	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) $	Eligible Rebate Amount (H) $ *Note 2*	Commitment Payment $
1	Plant Compressed Air System Upgrade 2008	04/30/2009	$278,548	$139,274	520,000	520,000	-	$41,600	$31,200	
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
		Total	**$278,548**		**520,000**	**520,000**	**0**	**$41,600**	**$31,200**	**$0**

Docket No. 13-0102-EL-EEC
Site: 20200 Sheldon Road

Notes
(1) Customer's usage is adjusted to account for the effects of the energy efficiency programs included in this application. When applicable, such adjustments are prorated to the in-service date to account for partial year savings.

(2) The eligible rebate amount is based upon 75% of the rebates offered by the FirstEnergy Commercial and Industrial Energy Efficiency programs or 75% of $0.08/kWh for custom programs for all energy savings eligible for a cash rebate as defined in the PUCO order in Case NO.10-834-EL-EEC dated 9/15/2010, not to exceed the lesser of 50% of the project cost or $250,000 per project. The rebate also cannot exceed $500,000 per customer per year, per utility service territory.

Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost $/MWh (B)	Utility Avoided Cost $ (C)	Utility Cost $ (D)	Cash Rebate $ (E)	Administrator Variable Fee $ (F)	Total Utility Cost $ (G)	UCT (H)
1	520	$ 308	$ 160,306	$ 4,050	$31,200	$5,200	$ 40,450	**4.0**
Total	**520**	**$ 308**	**160,306**	**4,050**	**$31,200**	**$5,200**	**40,450**	**4.0**

Notes

(A) From Exhibit 2, = kWh saved / 1000

(B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices.This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).

(C) = (A) * (B)

(D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.

(E) This is the amount of the cash rebate paid to the customer for this project.

(F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.

(G) = (D) + (E) + (F)

(H) =(C) / (G)

Foseco, a Division of Vesuvius USA Corp ~ Foseco-CD
Docket No. 13-0102-EL-EEC

Site: 20200 Sheldon Road

FirstEnergy®

Ohio Edison • The Illuminating Company • Toledo Edison

Mercantile Customer Program - Custom Project Rebate Calculator

Project Name and Number:	~~12-3270~~-EL-EEC 13-0102
Site Name:	**Foseco-CD**
Completed by (Name):	**Kirk Garrett**
Date completed:	**12/20/2012**

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * $0.08
Casco Energy Before/After Report	**520,000**	**41600.00**
Total Project Energy Savings kWh	**520,000**	
Total Custom Prescriptive Rebate Amount $		**$ 41,600.00**

Notes about this rebate calculation:
See attached Casco Energy Before/After Report

FOLLOW UP SURVEY OF COMPRESSED AIR SYSTEM PERFORMANCE

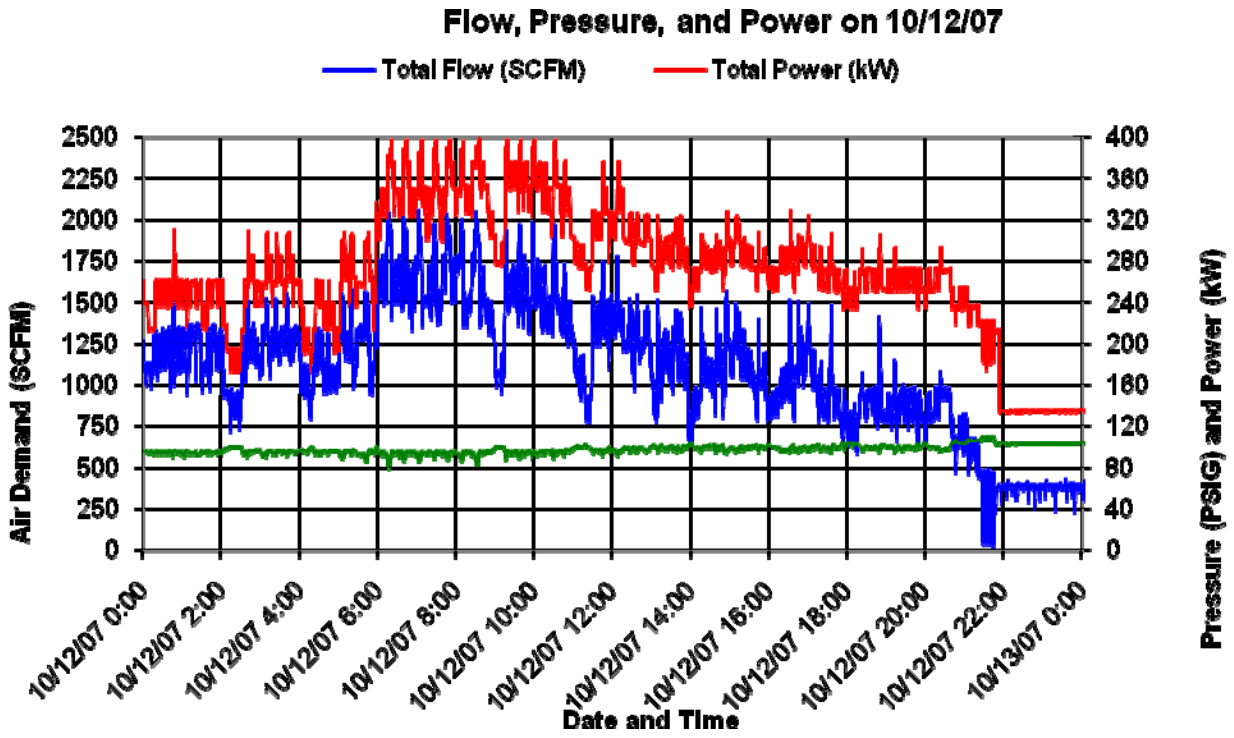
In order to determine the effectiveness of the recent compressed air system improvements, a follow-up review was performed. This compares data obtained in a compressed air audit performed prior to improvements (October 2007) to data from June 2009, obtained from the KAESER Sigma Air Manger master control system, which continually logs operating data.

Key points considered were average air demand, energy consumption, specific energy consumption, and operating pressure. All showed significant improvement, as shown in the following table.

Metric	2007	2009	Net Change	Comments
Average Compressed Air Demand During Operation (CFM)	1087.0	915.3	-15.8%	Reduced average demand is likely due to a combination of economic clmate and waste reduction measures, such as leak reduction, reduced operating pressure, and installation of no-loss drains.
Average Energy Consumption During Operation (kW)	257.8	157.5	-38.9%	At $ 0.065 per kwh, and 100 hours of operation per week, this savings translates to $ 33,900 annually. If production were to return to 24 hours / 7 days, this would increase to $ 56,950 annually.
Specific Performance (kw per 100 CFM)	23.72	17.21	-27.4%	The specific performance relates overall performance in terms of the power required for each 100 CFM. An estimated 10-15% of this improvement can be attributed to the more efficient KAESER compressors, while the rest is attributable to improved controls.
Average Operating Pressure (PSIG)	98.4	96.8	-1.6%	Every 2 PSIG requires 1% more power from compressors, and feeding excess pressure to the plant causes processes to use more air, so operating at as low a pressure as possible is preferred.
Standard Deviation of Pressure (PSIG)	4.62	2.8	-39.4%	Operating pressure band was reduced by 40%, providing stable, consistent pressure to the plant.

While air demand reduction may be significantly affected by the economic climate, all other metrics can be reasonably attributed to the air system improvements.

The following two pages show typical days from each of the two periods. It can easily be seen that the pressure band is now much tighter, and the power consumption is much more proportional to air demand.



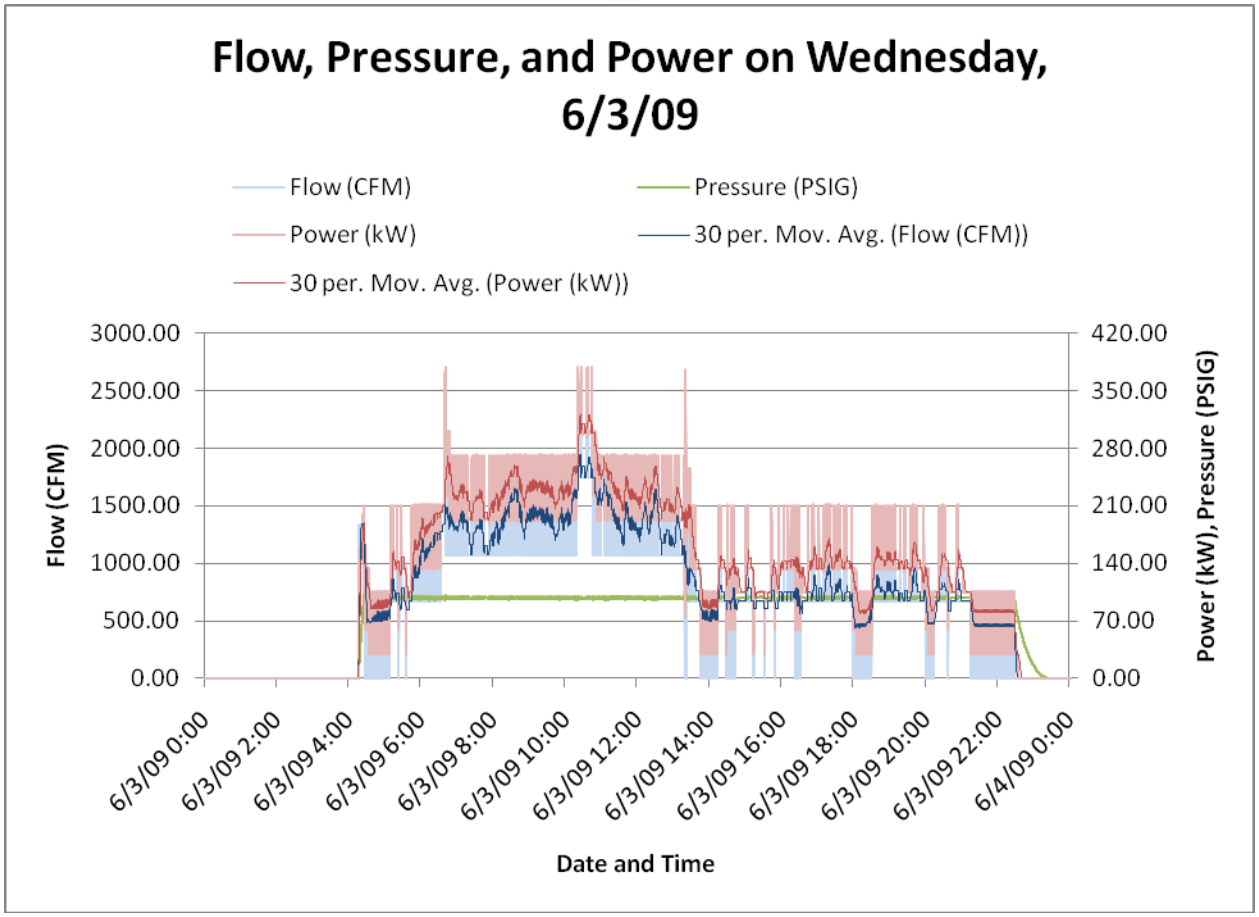
Cleveland, OH
2354 Edison Blvd.
Twinsburg, OH 44087
Ph. 330-425-2121
Fax 330-425-2122

Pittsburgh, PA
370 Meadowlands Blvd.
Washington, PA 15301
Ph. 724-746-6500
Fax 724-746-8500

Erie, PA
2022 Filmore Avenue
Erie, PA 16506
Ph. 814-835-2420
Fax 814-835-3061

Williamsport, PA
825 Route 15 Highway, Suite 1
South Williamsport, PA 17702
Ph. 570-323-7700
Fax 570-323-5707

www.cascousa.com



Cleveland, OH
2354 Edison Blvd.
Twinsburg, OH 44087
Ph. 330-425-2121
Fax 330-425-2122

Pittsburgh, PA
370 Meadowlands Blvd.
Washington, PA 15301
Ph. 724-746-6500
Fax 724-746-8500

Erie, PA
2022 Filmore Avenue
Erie, PA 16506
Ph. 814-835-2420
Fax 814-835-3061

Williamsport, PA
825 Route 15 Highway, Suite 1
South Williamsport, PA 17702
Ph. 570-323-7700
Fax 570-323-5707

www.cascousa.com

Summary of CascoUSA Savings Calculations, Project 1 info tab Savings, & Custom Project Rebate Calculator

Created By:
Kirk Garrett

Last Edited: 02/14/13

Subject	Creation Date	Author
520,000 kwh Calculation	02-14-13	Kirk Garrett
Documents referenced		
CascoUSA Savings – FosecoDivisionofVesuviusUSACorp_FosecoCD_SavingsSummaryfromCasco.pdf Project 1 info tab Savings – FosecoDivisionofVesuviusUSACorp_FosecoCD_excelapplication.xls Custom Project Rebate Calc -- FosecoDivisionofVesuviusUSACorp_FosecoCD_AirCompressorRebateCalculaor_P1.pdf		

Section 1; Hrs of operation Calculation:

From the document "FosecoDivisionofVesuviusUSACorp_FosecoCD_SavingsSummaryfromCasco.pdf", there are 2 graphs showing the air demand and kilowatt hr demand on an average production day. In 2007, the graph shows a 24 hr operation. In 2009 the graphs shows a 20 hr operation (we were operating 5 days a week both years). Since the last quarter of 2009, we've been operating 24 hrs/day, 5 days per week or more. In 2012, we averaged 24 hrs/day, 5 days per week plus 16 hrs on Saturday. For the basis of the savings calculation, we used 100 hrs since that is what was shown in the Casco report**. 20 hrs / day x 5 days/week x 52 weeks / year = 5200 hrs of operation in a year**

Section 2; 520,000 Kwh Calculation:

From the document "FosecoDivisionofVesuviusUSACorp_FosecoCD_SavingsSummaryfromCasco.pdf", there are 2 graphs showing the air demand and kilowatt hr demand on an average production day. The second row of the table on the first page of this report shows the average energy consumption during operation (kw). In 2007 it was 257.8 kw. In 2009 it was 157.5 kw. Multiplying these numbers by the hrs of operations in a year gives kwh.

2007: 257.8 x 5200 = 1,340,560 kwh
2009: 157.5 x 5200 = 819,000 kwh

The difference: 1,340,560 kwh – 819,000 kwh = 521,560 kwh

These numbers were transferred to the document "FosecoDivisionofVesuviusUSACorp_FosecoCD_excelapplication.xls, Project 1 info tab" During the transfer the 819,000 kwh number got changed to 821,600 kwh (a data entry error that reduced the estimated savings). The result was the total kwh savings was **520,000kwh** instead of 521,560 kwh. Since the documents were already submitted and the error was not in Foseco's favor, the error is not being corrected.

Section 3; $41,600 Energy Savings from Custom Project Rebate Calculator:

The 520,000 kwh number from section 2 above was plugged into the Mercantile Customer Program Customer Project Rebate Calculator (document "FosecoDivisionofVesuviusUSACorp_FosecoCD_AirCompressorRebateCalculaor_P1.pdf ") and multiplied by $0.08 to determine Total Customer Prescriptive Rebate Amount of $41,600.00

Mercantile Customer Project Commitment Agreement
Cash Rebate Option

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between The Cleveland Electric Illuminating Company, its successors and assigns (hereinafter called the "Company") and Foseco, a division of Vesuvius USA, Corp, Taxpayer ID No. 37-0893657 its permitted successors and assigns (hereinafter called the "Customer") (collectively the "Parties" or individually the "Party") and is effective on the date last executed by the Parties as indicated below.

WITNESSETH

WHEREAS, the Company is an electric distribution utility and electric light company, as both of these terms are defined in R.C. § 4928.01(A); and

WHEREAS, Customer is a mercantile customer, as that term is defined in R.C. § 4928.01(A)(19), doing business within the Company's certified service territory; and

WHEREAS, R.C. § 4928.66 (the "Statute") requires the Company to meet certain energy efficiency and peak demand reduction ("EE&PDR") benchmarks; and

WHEREAS, when complying with certain EE&PDR benchmarks the Company may include the effects of mercantile customer-sited EE&PDR projects; and

WHEREAS, Customer has certain customer-sited demand reduction, demand response, or energy efficiency project(s) as set forth in attached Exhibit 1 (the "Customer Energy Project(s)") that it desires to commit to the Company for integration into the Company's Energy Efficiency & Peak Demand Reduction Program Portfolio Plan ("Company Plan") that the Company will implement in order to comply with the Statute; and

WHEREAS, the Customer, pursuant to the Public Utilities Commission of Ohio's ("Commission") September 15, 2010 Order in Case No. 10-834-EL-EEC, desires to pursue a cash rebate of some of the costs pertaining to its Customer Energy Project(s) ("Cash Rebate") and is committing the Customer Energy Project(s) as a result of such incentive.

WHEREAS, Customer's decision to commit its Customer Energy Project(s) to the Company for inclusion in the Company Plan has been reasonably encouraged by the possibility of a Cash Rebate.

WHEREAS, in consideration of, and upon receipt of, said cash rebate, Customer will commit the Customer Energy Project(s) to the Company and will comply with all other terms and conditions set forth herein.

NOW THEREFORE, in consideration of the mutual promises set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, do hereby agree as follows:

1. **Customer Energy Projects.** Customer hereby commits to the Company and Company accepts for integration into the Company Plan the Customer Energy Project(s) set forth on attached Exhibit 1. Said commitment shall be for the life of the Customer Energy Project(s). Company will incorporate said project(s) into the Company Plan to the extent that such projects qualify. In so committing, and as evidenced by the affidavit attached hereto as Exhibit A, Customer acknowledges that the information provided to the Company about the Customer Energy Project(s) is true and accurate to the best of its knowledge.

a. By committing the Customer Energy Project(s) to the Company, Customer acknowledges and agrees that the Company shall control the use of the kWh and/or kW reductions resulting from said projects for purposes of complying with the Statute. By committing the Customer Energy Project(s), Customer further acknowledges and agrees that the Company shall take ownership of the energy efficiency capacity rights associated with said Project(s) and shall, at its sole discretion, aggregate said capacity into the PJM market through an auction. Any proceeds from any such bids accepted by PJM will be used to offset the costs charged to the Customer and other of the Company's customers for compliance with state mandated energy efficiency and/or peak demand requirements

b. The Company acknowledges that some of Customer's Energy Projects contemplated in this paragraph may have been performed under certain other federal and/or state programs in which certain parameters are required to be maintained in order to retain preferential financing or other government benefits (individually and collectively, as appropriate, "Benefits"). In the event that the use of any such project by the Company in any way affects such Benefits, and upon written request from the Customer, Company will release said Customer's Energy Project(s) to the extent necessary for Customer to meet the prerequisites for such Benefits. Customer acknowledges that such release (i) may affect Customer's cash rebate discussed in Article 3 below; and (ii) will not affect any of Customer's other requirements or obligations.

c. Any future Customer Energy Project(s) committed by Customer shall be subject to a separate application and, upon approval by the Commission, said projects shall become part of this Agreement.

d. Customer will provide Company or Company's agent(s) with reasonable assistance in the preparation of the Commission's standard joint application for approval of this Agreement ("Joint Application") that will be filed with the Commission, with such Joint Application being consistent with then current Commission requirements.

e. Upon written request and reasonable advance notice, Customer will grant employees or authorized agents of either the Company or the Commission reasonable, pre-arranged access to the Customer Energy Project(s) for purposes of measuring and verifying energy savings and/or peak demand reductions resulting from the Customer Energy Project(s). It is expressly agreed that consultants of either the Company or the Commission are their respective authorized agents.

2. **Joint Application to the Commission.** The Parties will submit the Joint Application using the Commission's standard "Application to Commit Energy Efficiency/Peak Demand Reduction Programs" ("Joint Application") in which they will seek the Commission's approval of (i) this Agreement; (ii) the commitment of the Customer Energy Project(s) for inclusion in the Company Plan; and (iii) the Customer's Cash Rebate.

   The Joint Application shall include all information as set forth in the Commission's standard form which, includes without limitation:

   i. A narrative description of the Customer Energy Project(s), including but not limited to, make, model and year of any installed and/or replaced equipment;
   ii. A copy of this Agreement; and
   iii. A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results.

3. **Customer Cash Rebate.** Upon Commission approval of the Joint Application, Customer shall provide Company with a W-9 tax form, which shall at a minimum include Customer's tax identification number. Within the greater of 90 days of the Commission's approval of the Joint Application or the completion of the Customer Energy Project, the Company will issue to the Customer the Cash Rebate in the amount set forth in the Commission's Finding and Order approving the Joint Application.

    a. Customer acknowledges: i) that the Company will cap the Cash Rebate at the lesser of 50% of Customer Energy Project(s) costs or $250,000; ii) the maximum rebate that the Customer may receive per year is $500,000 per Taxpayer Identification Number per utility service territory; and iii) if the Customer Energy Project qualifies for a rebate program approved by the Commission and offered by the Company, Customer may still elect to file such project under the Company's mercantile customer self direct program, however the Cash Rebate that will be paid shall be discounted by 25%; and

    b. Customer acknowledges that breaches of this Agreement, include, but are not limited to:

        i. Customer's failure to comply with the terms and conditions set forth in the Agreement, or its equivalent, within a reasonable period of time after receipt of written notice of such non-compliance;

        ii. Customer knowingly falsifying any documents provided to the Company or the Commission in connection with this Agreement or the Joint Application.

    c. In the event of a breach of this Agreement by the Customer, Customer agrees and acknowledges that it will repay to the Company, within 90 days of receipt of written notice of said breach, the full amount of the Cash Rebate paid under this Agreement. This remedy is in addition to any and all other remedies available to the Company by law or equity.

4. **Termination of Agreement.** This Agreement shall automatically terminate:

    a. If the Commission fails to approve the Joint Agreement;

    b. Upon order of the Commission; or

    c. At the end of the life of the last Customer Energy Project subject to this Agreement.

    Customer shall also have an option to terminate this Agreement should the Commission not approve the Customer's Cash Rebate, provided that Customer provides the Company with written notice of such termination within ten days of either the Commission issuing a final appealable order or the Ohio Supreme Court issuing its opinion should the matter be appealed.

5. **Confidentiality.** Each Party shall hold in confidence and not release or disclose to any person any document or information furnished by the other Party in connection with this Agreement that is designated as confidential and proprietary ("Confidential Information"), unless: (i) compelled to disclose such document or information by judicial, regulatory or administrative process or other provisions of law; (ii) such document or information is generally available to the public; or (iii) such document or information was available to the receiving Party on a non-confidential basis at the time of disclosure.

    a. Notwithstanding the above, a Party may disclose to its employees, directors, attorneys, consultants and agents all documents and information furnished by the other Party in

connection with this Agreement, provided that such employees, directors, attorneys, consultants and agents have been advised of the confidential nature of this information and through such disclosure are deemed to be bound by the terms set forth herein.

b. A Party receiving such Confidential Information shall protect it with the same standard of care as its own confidential or proprietary information.

c. A Party receiving notice or otherwise concluding that Confidential Information furnished by the other Party in connection with this Agreement is being sought under any provision of law, to the extent it is permitted to do so under any applicable law, shall endeavor to: (i) promptly notify the other Party; and (ii) use reasonable efforts in cooperation with the other Party to seek confidential treatment of such Confidential Information, including without limitation, the filing of such information under a valid protective order.

d. By executing this Agreement, Customer hereby acknowledges and agrees that Company may disclose to the Commission or its Staff any and all Customer information, including Confidential Information, related to a Customer Energy Project, provided that Company uses reasonable efforts to seek confidential treatment of the same.

6. **Taxes.** Customer shall be responsible for all tax consequences (if any) arising from the payment of the Cash Rebate.

7. **Notices.** Unless otherwise stated herein, all notices, demands or requests required or permitted under this Agreement must be in writing and must be delivered or sent by overnight express mail, courier service, electronic mail or facsimile transmission addressed as follows:

If to the Company:

FirstEnergy Service Company
76 South Main Street
Akron, OH 44308
Attn: Victoria Nofziger
Telephone: 330-384-4684
Fax: 330-761-4281
Email: ymnofziger@firstenergycorp.com

If to the Customer:

Foseco, a division of Vesuvius USA Corp
20200 Sheldon Road
Brook Park, Ohio, 44142
Attn: Kirk Garrett
Telephone:(440)863-2705
Fax:(440)816-7180
Email:kirk.garrett@foseco.com

or to such other person at such other address as a Party may designate by like notice to the other Party. Notice received after the close of the business day will be deemed received on the next business day; provided that notice by facsimile transmission will be deemed to have been received by the recipient if the recipient confirms receipt telephonically or in writing.

8. **Authority to Act.** The Parties represent and warrant that they are represented by counsel in connection with this Agreement, have been fully advised in connection with the execution thereof, have taken all legal and corporate steps necessary to enter into this Agreement, and that the undersigned has the authority to enter into this Agreement, to bind the Parties to all provisions herein and to take the actions required to be performed in fulfillment of the undertakings contained herein.

9. **Non-Waiver.** The delay or failure of either party to assert or enforce in any instance strict performance of any of the terms of this Agreement or to exercise any rights hereunder conferred, shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon such terms or rights at any later time or on any future occasion.

10. **Entire Agreement.** This Agreement, along with related exhibits, and the Company's Rider DSE, or its equivalent, as amended from time to time by the Commission, contains the Parties' entire understanding with respect to the matters addressed herein and there are no verbal or collateral representations, undertakings, or agreements not expressly set forth herein. No change in, addition to, or waiver of the terms of this Agreement shall be binding upon any of the Parties unless the same is set forth in writing and signed by an authorized representative of each of the Parties. In the event of any conflict between Rider DSE or its equivalent and this document, the latter shall prevail.

11. **Assignment.** Customer may not assign any of its rights or obligations under this Agreement without obtaining the prior written consent of the Company, which consent will not be unreasonably withheld. No assignment of this Agreement will relieve the assigning Party of any of its obligations under this Agreement until such obligations have been assumed by the assignee and all necessary consents have been obtained.

12. **Severability.** If any portion of this Agreement is held invalid, the Parties agree that such invalidity shall not affect the validity of the remaining portions of this Agreement, and the Parties further agree to substitute for the invalid portion a valid provision that most closely approximates the economic effect and intent of the invalid provision.

13. **Governing Law.** This Agreement shall be governed by the laws and regulations of the State of Ohio, without regard to its conflict of law provisions.

14. **Execution and Counterparts.** This Agreement may be executed in multiple counterparts, which taken together shall constitute an original without the necessity of all parties signing the same page or the same documents, and may be executed by signatures to electronically or telephonically transmitted counterparts in lieu of original printed or photocopied documents. Signatures transmitted by facsimile shall be considered original signatures.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized officers or representatives as of the day and year set forth below.

The Cleveland Electric Illuminating Company_
(Company)

By: _____

Title: V.P. Of Energy Efficiency

Date: 12-26-12

Foseco, a division of Vesuvius USA Corp._
(Customer)

By: _____ KIRK GARRETT

Title: Operations Manager

Date: 12/20/12

Affidavit of Foseco, a division of Vesuvius USA Corp. – Exhibit _A _

STATE OF OHIO)
) SS:
COUNTY OF Cuyahoga)

I, Kirk Garrett ,being first duly sworn in accordance with law, deposes and states as follows:

1. I am the Operations Manager of Foseco, a division of Vesuvius USA Corp. ("Customer") As part of my duties, I oversee energy related matters for the Customer.
2. The Customer has agreed to commit certain energy efficiency projects to The Cleveland Electric Illuminating Company ("Company"), which are the subject of the agreement to which this affidavit is attached ("Project(s)").
3. In exchange for making such a commitment, the Company has agreed to provide Customer with Cash ("Incentive"). This Incentive was a critical factor in the Customer's decision to go forward with the Project(s) and to commit the Project(s) to the Company.
4. All information related to said Project(s) that has been submitted to the Company is true and accurate to the best of my knowledge.

FURTHER AFFIANT SAYETH NAUGHT.

KIRK GARRETT
12/20/12

Sworn to before me and subscribed in my presence this 20th day of December 2012

Mary Ellen Wagner
Notary

NOTARIAL SEAL STATE OF OHIO

MARY ELLEN WAGNER
NOTARY PUBLIC
STATE OF OHIO
Recorded In
Cuyahoga County
My Comm. Exp. 4/23/17

Summary: Application electronically filed by Ms. Lindsey E Sacher on behalf of The Cleveland Electric Illuminating Company and Foseco, a division of Vesuvius USA Corp.