



Public Utilities Commission

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

Case No.: 13-0242-EL-EEC

Mercantile Customer: Ashtabula Area City Schools

Electric Utility: The Cleveland Electric Illuminating Company

Program Title or Description: New Construction of Junior High School, Elementary School Campus, and retrofit of Board Offices

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: Ashtabula Area City Schools

Principal address: 2630 W. 13th Street, Ashtabula, OH 44004

Address of facility for which this energy efficiency program applies: See Attachment A

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

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):
11/18/2010, 3/28/2012.
- ☐ 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: 20451 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: 493946 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?

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

_____ 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 \$18114. (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.



Public Utilities Commission

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

Case No.: 13-0242-EL-EEC

State of Ohio :

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

1. I am the duly authorized representative of:

Ashland Area City Schools

[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.

[Signature] Director of operations
Signature of Affiant & Title

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

Jayne M. Fortney
Signature of official administering oath

JAYNE M. Fortney.
Print Name and Title

My commission expires on 4/1/2014



Attachment A - Site Summary**Ashtabula Area City Schools - The Illuminating Company- Energy Efficiency Mercantile Application Summary**

Building(s)	Address	City	State	Zip	Utility	Saved kWh	Saved kW	Eligible Rebate Amount
Elementary S	401 W. 44th Street	Ashtabula	OH	44004	The Illuminating Company	86673	0	\$3,041
Elementary SE and NE	401 W. 44th Street	Ashtabula	OH	44004	The Illuminating Company	121011	0	\$3,387
Elementary SW and NW	401 W. 44th Street	Ashtabula	OH	44004	The Illuminating Company	176827	0	\$6,566
Junior High School	6620 Sanborn Road	Ashtabula	OH	44004	The Illuminating Company	109435	0	\$4,151
Board Offices	2630 W. 13th Street	Ashtabula	OH	44004	The Illuminating Company	20451	0	\$969
						514397	0	\$18,114

Customer Legal Entity Name: Ashtabula Area City Schools

Site Address: Ashtabula Lakeside Board Offices

Principal Address: 2630 West 13th Street

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	Lighting Retrofit and Occupancy Sensor Installation	Renovation of layout of the board offices causing a large reduction in the number of fixtures and the purchase and installation of new T8 fixtures and installation of occupancy sensors to control the new lighting fixtures installed in the board offices building.	The energy savings were calculated using the FE Lighting Rebate Calculator (AACS_BO_Lighting Rebate Calculator_P1). The project involved replacing 32W T8 fixtures with new 32W T8 fixtures, as well as installing occupancy sensors. The savings are due to the fact that there were a lot less fixtures installed than were previously existing in the building and do not run when the rooms are unoccupied. Attachment U contains the light specifications for the new fixtures. Attachment V contains the specifications for the installed sensors.	Within 5 years and as the old bulbs reached the end of their life.	N/A

Docket No. 13-0242

Site: 2630 West 13th Street

Exhibit 2

Customer Legal Entity Name: Ashtabula Area City Schools
Site Address: Ashtabula Lakeside Board Offices
Principal Address: 2630 West 13th Street

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2010	27,010	27,010	27,010
Average	27,010	27,010	27,010

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
1	Lighting Retrofit and Occupancy Sensor Installation	11/10/2011	\$16,850	\$8,425	20,451	20,451	-	\$1,292	\$969
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
	Total		\$16,850		20,451	20,451	0	\$1,292	\$969

Docket No. 13-0242
Site: 2630 West 13th Street

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.

**Commitment
Payment
\$**

\$0

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	20	\$ 308	\$ 6,305	\$ 3,546	\$969	\$0	\$ 4,515	1.4
Total	20	\$ 308	6,305	3,546	\$969	\$0	4,515	1.4

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)

Ashtabula Area City Schools ~ Ashtabula Lakeside Board Offices

Docket No. 13-0242

Site: 2630 West 13th Street

Lighting Inventory Form

Applicant Name:	Ashtabula Area City Schools
Facility Name:	Board Offices
Date:	8/9/2012

Instructions: Please use one line for each fixture type in a room or area.

For existing or proposed control, choose OCC for Occupancy Sensor, DAYLTG for photosensor, or NONE for none. Controls must save energy to qualify.

The total of Column S, the quantities of CFLs and exit signs in Column M, and the quantities of sensors in Column R, will be used to calculate your incentive on the NonStandard Lighting form.

[illegible]

[illegible]

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	20,451
Total Change in Connected Load	3.60

Annual Estimated Cost Savings	\$2,045.10
Annual Operating Hours	3,435

Interior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$692.30
Exterior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Total retrofit CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	\$0.00
Total retrofit LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$600.00

Total Calculated Incentive	\$1,292.30
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Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	0
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	24
Total Quantity for Daylight Sensors	0

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	Ashtabula Lakeside JHS Motor VFDs	This application is for the variable frequency drives installed on some of the motors in the school building as part of a new construction project. The units being claimed are those that are below code. More information can be found in Tab 3 Attachment M, which details the VFD calculations.	A 20% energy consumption savings was assumed. The rebate amount was calculated using the prescriptive \$35/HP See Attachment M: VFD Calcs, for calculations. The VFD specification sheets are labeled as Attachment N and the as-built mechanical schedule showing where the VFDs are installed is labeled as Attachment R.	N/A	The less efficient equipment in this case would have been no VFDs at all. It was determined, however, that the financials of these controls were worth the investment due to the energy savings that could be obtained when operating at part load.
2	Ashtabula Lakeside JHS Heat Recovery Units	This is an application for the enthalpy based heat recover units (HRUs) installed as part of the new construction of Ashtabula Lakeside Junior High School. There were 5 heat recovery wheels installed in various air handling units throughout the building.	To calculate the kWh savings for the heat recovery wheels, bin weather data was obtained for the area. This data gives the typical number of hours the area can expect to see certain outdoor temperatures. With this information, it could be determined how much outdoor air could be brought in (i.e. how much air is going through the heat recovery wheel) at the given outdoor temperatures. Once the BTU's saved from the enthalpy wheels were obtained, they were divided by the EER of the chiller to obtain the kWh saved. These calculations are shown in Attachment O and the as-built mechanical schedule showing the location/specs of the HRWs is in Attachment S.	N/A	The less efficient equipment in this case would have been no HRUs at all. It was determined, however, that the financials of these units were worth the investment due to the energy savings that could be obtained with respect to cooling energy.
3	Ashtabula JHS Lighting Controls	Installation of occupancy sensor controls on the newly installed lighting fixtures in the school. Occupancy sensor costs included in the general construction contract for the New Lakeside Junior High School.	The kWh reduction was calculated assuming an 80% runtime on the lights controlled. The watts controlled at 100% runtime minus the watts controlled at 80% runtime gives the reduced wattage, which is then converted to kWh savings using the hours of operation for a primary school building. There were 95 sensors in total, so the prescriptive incentive for the controls is: 95 units x \$25/unit = \$2375. Please refer to Attachment P for the occupancy sensor totals. The kWh savings are taken directly from the AACS_JHS_Lighting Rebate Calculator_P3. The lighting schedule for the school is located in Attachment T.	N/A	Less efficient would have been no sensors

Docket No. 13-0242

Site: 6620 Sanborn Road

Exhibit 2

Customer Legal Entity Name: Ashtabula Area City Schools
 Site Address: Ashtabula Lakeside Junior High School
 Principal Address: 6620 Sanborn Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) <i>Note 1</i>
2010	955,520	955,520	989,568
Average	955,520	955,520	989,568

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) \$ <i>Note 2</i>
1	Ashtabula Lakeside JHS Motor VFDs	04/28/2010	\$60,575	\$30,288	6,562	6,562	-	\$700	\$525
2	Ashtabula Lakeside JHS Heat Recovery Units	04/28/2010	\$185,960	\$92,980	30,753	30,753	-	\$2,460	\$1,845
3	Ashtabula JHS Lighting Controls	11/18/2010	\$2,172,106	\$1,086,053	72,120	72,120	-	\$2,375	\$1,781
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
Total			\$2,418,641		109,435	109,435	0	\$5,535	\$4,151

Docket No. 13-0242
 Site: 6620 Sanborn 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.

**Commitment
Payment
\$**

\$0

Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh	Utility Avoided Cost	Utility Avoided Cost	Utility Cost	Cash Rebate	Administrator Variable Fee	Total Utility Cost	UCT
		\$/MWh	\$	\$	\$	\$	\$	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
1	7	\$ 308	\$ 2,023	\$ 1,182	\$525		\$ 1,707	1.2
2	31	\$ 308	\$ 9,481	\$ 1,182	\$1,845		\$ 3,027	3.13
3	72	\$ 308	\$ 22,233	\$ 1,182	\$1,781		\$ 2,963	7.50
Total	109	\$ 308	33,737	3,546	\$4,151	\$0	7,697	4.4

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)

Ashtabula Area City Schools ~ Ashtabula Lakeside Junior High School

Docket No. 13-0242

Site: 6620 Sanborn Road

Ohio Edison • The Illuminating Company • Toledo Edison

Mercantile Customer Program - Custom Project Rebate Calculator

Project Name and Number:	Ashtabula Area City Schools 12-1432
Site Name:	Lakeside Junior High School
Completed by (Name):	Trace Searles, Plug Smart
Date completed:	10/19/2011

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
Heat Recovery Wheels in AHUs	30,753	2460.22
Total Project Energy Savings kWh	30,753	
Total Custom Prescriptive Rebate Amount \$	\$	2,460.22

Notes about this rebate calculation:
See FE.Ashtabula_LakesideJHS.HeatRecov.Calc for all heat recovery calculations.

HEAT RECOVERY WHEEL SAVINGS SUMMARY						
	AHU-1	AHU-3	AHU-6	AHU-7	AHU-8	TOTAL
kWh:	3,837.2	4,175.2	54.9	22,017.9	667.6	30,752.7
Dollars:	\$ 306.97	\$ 334.02	\$ 4.39	\$ 1,761.43	\$ 53.41	\$ 2,460.22
75%	\$ 230.23	\$ 250.51	\$ 3.29	\$ 1,321.07	\$ 40.05	\$ 1,845.16

USA_OH_Cleveland-Hopkins.Intl.AP.725240_TMY3.bin

HEAT RECOVERY WHEEL SAVINGS

AHU-1

INPUTS

Minimum Fraction Outdoor Air:	20%
Heat Recover Effectiveness:	72.5%
Set Point Temperature:	76.6 F
Set Point Enthalpy:	29.01 Btu/lba
Supply Air Temperature:	54.2 F
Supply Air Enthalpy:	22.45 Btu/lba
Supply Air Volume:	10500 cfm
Supply Air Density:	0.075 lb/ft^3

Rate:	\$0.08
75% Load EER:	13.5

SAVINGS

Cooling kWh:	3,837.16
Dollars:	\$306.97
75%	\$230.23

StrTemp	EndTemp	T(F)	h(Btu/lba)	hrs1-24	foa	Tma(F)	hma(Btu/lba)	Q (mmBTU)
=====	=====	=====	=====	=====	=====	=====	=====	=====
95	99	95.7	37.1	3	20%	80.4	30.63	0.17
90	94	91.9	39	43	20%	79.7	31.01	2.94
85	89	87.5	36.5	127	20%	78.8	30.51	6.52
80	84	82	33.6	359	20%	77.7	29.93	11.29
75	79	76.7	31.2	523	20%	76.6	29.45	7.85
70	74	72.4	30.1	617	100%	72.4	30.10	23.04
65	69	68	28	754	100%	68.0	28.00	0.00
60	64	62.5	24.8	1029	100%	62.5	24.80	0.00
55	59	57.2	21.3	604	100%	57.2	21.30	0.00
50	54	51.9	18.5	631	91%	54.2	19.48	0.00
45	49	47.6	16.5	420	77%	54.2	19.35	0.00
40	44	42.8	14.7	529	66%	54.2	19.53	0.00
35	39	37.4	12.6	904	57%	54.2	19.63	0.00
30	34	32	10.5	749	50%	54.2	19.71	0.00
25	29	27.5	8.8	497	46%	54.2	19.79	0.00
20	24	23.2	7.4	370	42%	54.2	19.95	0.00
15	19	17.5	5.6	335	38%	54.2	20.14	0.00
10	14	12.2	4.1	155	35%	54.2	20.35	0.00
5	9	7.7	2.8	65	33%	54.2	20.49	0.00
0	4	2.7	1.4	22	30%	54.2	20.64	0.00
-5	-1	-1.5	0.2	21	29%	54.2	20.75	0.00
-10	-6	-5.1	-0.7	3	27%	54.2	20.86	0.00

51.80

USA_OH_Cleveland-Hopkins.Intl.AP.725240_TMY3.bin

HEAT RECOVERY WHEEL SAVINGS

AHU-3

INPUTS

Minimum Fraction Outdoor Air:	20%
Heat Recover Effectiveness:	72.9%
Set Point Temperature:	76.3 F
Set Point Enthalpy:	28.86 Btu/lba
Supply Air Temperature:	53.4 F
Supply Air Enthalpy:	22.04 Btu/lba
Supply Air Volume:	10500 cfm
Supply Air Density:	0.075 lb/ft^3

Rate:	\$0.08
75% Load EER:	13.5

SAVINGS

Cooling kWh:	4175.22
Dollars:	334.02
75%	\$250.51

StrTemp	EndTemp	T(F)	h(Btu/lba)	hrs1-24	foa	Tma(F)	hma(Btu/lba)	Q (mmBTU)
=====	=====	=====	=====	=====	=====	=====	=====	=====
95	99	95.7	37.1	3	20%	80.2	30.51	0.17
90	94	91.9	39	43	20%	79.4	30.89	3.00
85	89	87.5	36.5	127	20%	78.5	30.39	6.68
80	84	82	33.6	359	20%	77.4	29.81	11.72
75	79	76.7	31.2	523	20%	76.4	29.33	8.43
70	74	72.4	30.1	617	100%	72.4	30.10	26.35
65	69	68	28	754	100%	68.0	28.00	0.00
60	64	62.5	24.8	1029	100%	62.5	24.80	0.00
55	59	57.2	21.3	604	100%	57.2	21.30	0.00
50	54	51.9	18.5	631	94%	53.4	19.14	0.00
45	49	47.6	16.5	420	80%	53.4	19.00	0.00
40	44	42.8	14.7	529	68%	53.4	19.18	0.00
35	39	37.4	12.6	904	59%	53.4	19.29	0.00
30	34	32	10.5	749	52%	53.4	19.37	0.00
25	29	27.5	8.8	497	47%	53.4	19.45	0.00
20	24	23.2	7.4	370	43%	53.4	19.61	0.00
15	19	17.5	5.6	335	39%	53.4	19.80	0.00
10	14	12.2	4.1	155	36%	53.4	20.01	0.00
5	9	7.7	2.8	65	33%	53.4	20.16	0.00
0	4	2.7	1.4	22	31%	53.4	20.32	0.00
-5	-1	-1.5	0.2	21	29%	53.4	20.42	0.00
-10	-6	-5.1	-0.7	3	28%	53.4	20.54	0.00

56.37

HEAT RECOVERY WHEEL SAVINGS

AHU-6

INPUTS

Minimum Fraction Outdoor Air:	20%
Heat Recover Effectiveness:	71.7%
Set Point Temperature:	89 F
Set Point Enthalpy:	36.50 Btu/lba
Supply Air Temperature:	55 F
Supply Air Enthalpy:	22.75 Btu/lba
Supply Air Volume:	10500 cfm
Supply Air Density:	0.075 lb/ft^3

Rate:	\$0.08
75% Load EER:	13.5

SAVINGS

Cooling kWh:	54.86
Dollars:	4.39
75%	\$3.29

StrTemp	EndTemp	T(F)	h(Btu/lba)	hrs1-24	foa	Tma(F)	hma(Btu/lba)	Q (mmBTU)
=====	=====	=====	=====	=====	=====	=====	=====	=====
95	99	95.7	37.1	3	20%	90.3	36.62	0.01
90	94	91.9	39	43	20%	89.6	37.00	0.73
85	89	87.5	36.5	127	100%	87.5	36.50	0.00
80	84	82	33.6	359	100%	82.0	33.60	0.00
75	79	76.7	31.2	523	100%	76.7	31.20	0.00
70	74	72.4	30.1	617	100%	72.4	30.10	0.00
65	69	68	28	754	100%	68.0	28.00	0.00
60	64	62.5	24.8	1029	100%	62.5	24.80	0.00
55	59	57.2	21.3	604	100%	57.2	21.30	0.00
50	54	51.9	18.5	631	92%	55.0	20.00	0.00
45	49	47.6	16.5	420	82%	55.0	20.07	0.00
40	44	42.8	14.7	529	74%	55.0	20.46	0.00
35	39	37.4	12.6	904	66%	55.0	20.75	0.00
30	34	32	10.5	749	60%	55.0	20.99	0.00
25	29	27.5	8.8	497	55%	55.0	21.19	0.00
20	24	23.2	7.4	370	52%	55.0	21.46	0.00
15	19	17.5	5.6	335	48%	55.0	21.81	0.00
10	14	12.2	4.1	155	44%	55.0	22.16	0.00
5	9	7.7	2.8	65	42%	55.0	22.41	0.00
0	4	2.7	1.4	22	39%	55.0	22.67	0.00
-5	-1	-1.5	0.2	21	38%	55.0	22.86	0.00
-10	-6	-5.1	-0.7	3	36%	55.0	23.06	0.00

0.74

HEAT RECOVERY WHEEL SAVINGS

AHU-7

INPUTS

Minimum Fraction Outdoor Air:	20%
Heat Recover Effectiveness:	74.2%
Set Point Temperature:	64.2 F
Set Point Enthalpy:	20.21 Btu/lba
Supply Air Temperature:	55 F
Supply Air Enthalpy:	22.94 Btu/lba
Supply Air Volume:	8500 cfm
Supply Air Density:	0.075 lb/ft^3

Rate:	\$0.08
75% Load EER:	13.5

SAVINGS

Cooling kWh:	22017.90
Dollars:	1,761.43
75%	\$1,321.07

StrTemp	EndTemp	T(F)	h(Btu/lba)	hrs1-24	foa	Tma(F)	hma(Btu/lba)	Q (mmBTU)
=====	=====	=====	=====	=====	=====	=====	=====	=====
95	99	95.7	37.1	3	20%	70.5	23.59	0.29
90	94	91.9	39	43	20%	69.7	23.97	4.59
85	89	87.5	36.5	127	20%	68.9	23.47	11.74
80	84	82	33.6	359	20%	67.8	22.89	27.29
75	79	76.7	31.2	523	20%	66.7	22.41	32.63
70	74	72.4	30.1	617	20%	65.8	22.19	34.64
65	69	68	28	754	20%	65.0	21.77	33.34
60	64	62.5	24.8	1029	100%	62.5	24.80	134.05
55	59	57.2	21.3	604	100%	57.2	21.30	18.69
50	54	51.9	18.5	631	75%	55.0	18.93	0.00
45	49	47.6	16.5	420	55%	55.0	18.15	0.00
40	44	42.8	14.7	529	43%	55.0	17.84	0.00
35	39	37.4	12.6	904	34%	55.0	17.60	0.00
30	34	32	10.5	749	29%	55.0	17.44	0.00
25	29	27.5	8.8	497	25%	55.0	17.35	0.00
20	24	23.2	7.4	370	22%	55.0	17.34	0.00
15	19	17.5	5.6	335	20%	54.9	17.29	0.00
10	14	12.2	4.1	155	20%	53.8	16.99	0.00
5	9	7.7	2.8	65	20%	52.9	16.73	0.00
0	4	2.7	1.4	22	20%	51.9	16.45	0.00
-5	-1	-1.5	0.2	21	20%	51.1	16.21	0.00
-10	-6	-5.1	-0.7	3	20%	50.3	16.03	0.00

297.24

USA_OH_Cleveland-Hopkins.Intl.AP.725240_TMY3.bin

HEAT RECOVERY WHEEL SAVINGS

AHU-8

INPUTS

Minimum Fraction Outdoor Air:	20%
Heat Recover Effectiveness:	78.8%
Set Point Temperature:	76.1 F
Set Point Enthalpy:	28.79 Btu/lba
Supply Air Temperature:	55 F
Supply Air Enthalpy:	22.81 Btu/lba
Supply Air Volume:	1500 cfm
Supply Air Density:	0.075 lb/ft^3

Rate:
75% Load EER:
SAVIN
Cooling kWh:
Dollars:
75%

StrTemp	EndTemp	T(F)	h(Btu/lba)	hrs1-24	foa	Tma(F)	hma(Btu/lba)
=====	=====	=====	=====	=====	=====	=====	=====
95	99	95.7	37.1	3	20%	80.0	30.45
90	94	91.9	39	43	20%	79.3	30.83
85	89	87.5	36.5	127	20%	78.4	30.33
80	84	82	33.6	359	20%	77.3	29.75
75	79	76.7	31.2	523	20%	76.2	29.27
70	74	72.4	30.1	617	100%	72.4	30.10
65	69	68	28	754	100%	68.0	28.00
60	64	62.5	24.8	1029	100%	62.5	24.80
55	59	57.2	21.3	604	100%	57.2	21.30
50	54	51.9	18.5	631	87%	55.0	19.82
45	49	47.6	16.5	420	74%	55.0	19.69
40	44	42.8	14.7	529	63%	55.0	19.86
35	39	37.4	12.6	904	55%	55.0	19.96
30	34	32	10.5	749	48%	55.0	20.04
25	29	27.5	8.8	497	43%	55.0	20.11
20	24	23.2	7.4	370	40%	55.0	20.26
15	19	17.5	5.6	335	36%	55.0	20.44
10	14	12.2	4.1	155	33%	55.0	20.64
5	9	7.7	2.8	65	31%	55.0	20.77
0	4	2.7	1.4	22	29%	55.0	20.92
-5	-1	-1.5	0.2	21	27%	55.0	21.02
-10	-6	-5.1	-0.7	3	26%	55.0	21.13

Lighting Inventory Form

Applicant Name:	Ashtabula Area City Schools
Facility Name:	Lakeside Junior High School
Date:	4/23/2012

Instructions: Please use one line for each fixture type in a room or area.

For existing or proposed control, choose OCC for Occupancy Sensor, DAYLTG for photosensor, or NONE for none. Controls must save energy to qualify.

The total of Column S, the quantities of CFLs and exit signs in Column M, and the quantities of sensors in Column R, will be used to calculate your incentive on the NonStandard Lighting form.

[illegible]

[illegible]

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	72,120
Total Change in Connected Load	0.00

Annual Estimated Cost Savings	\$7,212.00
Annual Operating Hours	2,080

Interior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Exterior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Total retrofit CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	\$0.00
Total retrofit LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$2,375.00

Total Calculated Incentive	\$2,375.00
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Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	95
Total Quantity for Daylight Sensors	0

Please briefly describe how you estimated your coincidence factor (CF) and applicant equivalent full-load hours (EFLH) for facility type "Other" indicated on the Lighting Form tab

Demand Savings (For Internal Use Only)

0.00

Attachment E: VFD Calcs
0.735 kW/HP

Total Controlled HP	Motor Efficiency	kW	Operating Hours	kWh	Savings Assumed	Savings kWh	New kWh
20	80%	11.76	2790	32810.4	20%	6562.08	26248.32

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	Ashtabula Lakeside Elementary Campus Building S Lighting and Controls	Purchase and installation of new lighting materials for a newly constructed elementary school campus in Ashtabula, Ohio. A room by room area method was used in COMCheck to compare the newly installed lighting to ASHRAE code. Also includes the purchase and installation of occupancy controls for the newly installed lighting at the Ashtabula Elementary Campus.	A room by room area method was used in COMCheck to produce an allowed wattage based on ASHRAE code. This was compared to the proposed wattage of installed fixtures and savings was calculated as this difference plus the savings generated from occ sensors. Attachment B is the countsheet, which shows the type and number of fixtures and sensors. The COMCheck can be viewed in Attachment E. All calculations/data above and in the COMCheck match those in the FE Lighting Rebate Calculator (AACS_LECS_Lighting Rebate Calculator_P1). The as-built lighting schedule is labeled as Attachment K. Attachment J contains the specifications for installed occupancy sensors.	N/A	Higher efficiency products were sought after in order to produce greater energy savings that less efficient equipment would not produce.
2	Ashtabula Lakeside Elementary Campus Building S Chiller	Savings due to the installation of a York YCIV 0157 SA 46V ABS chiller.	Binned weather data was used to determine chiller runtimes which was then used calculate savings of the proposed chillers versus ASHRAE minimum compliant chillers. These calculations can be found in Attachment F and in the custom rebate form AACS_LECS_Custom Project Cash Rebate Form_P2. See Attachment H for the chiller specifications, including the IPLV listing. Attachment L is the as-built mechanical schedule for the elementary campus.	N/A	Higher efficiency chiller was chosen to produce energy savings that a lower efficiency model would not produce.

Docket No. 13-0242

Site: 401 W. 44th Street

Exhibit 2

Customer Legal Entity Name: Ashtabula Area City Schools
Site Address: Ashtabula Elementary Lakeside Campus Building S
Principal Address: 401 W. 44th Street

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) <i>Note 1</i>
2011	528,520	528,520	528,520
Average	528,520	528,520	528,520

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) \$ <i>Note 2</i>
1	Ashtabula Lakeside Elementary Campus Building S Lighting and Controls	01/06/2012	\$101,600	\$50,800	66,139	66,139	-	\$2,411	\$1,808
2	Ashtabula Lakeside Elementary Campus Building S Chiller	03/28/2012	\$63,000	\$31,500	20,534	20,534	-	\$1,643	\$1,232
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
Total			\$164,600		86,673	86,673	0	\$4,054	\$3,041

Docket No. 13-0242
Site: 401 W. 44th Street

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.

**Commitment
Payment
\$**

\$0

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	66	\$ 308	\$ 20,389	\$ 2,025	\$1,808		\$ 3,833	5.3
2	21	\$ 308	\$ 6,330	\$ 2,025	\$1,232		\$ 3,257	1.94
Total	87	\$ 308	26,720	4,050	\$3,041	\$0	7,091	3.8

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)

Ashtabula Area City Schools ~ Ashtabula Elementary Lakeside Campus Building S
Docket No. 13-0242

Site: 401 W. 44th Street

Attachment F: Ashtabula Lakeside Elementary Campus Building S Chiller Savings Calcs

Custom Chiller Calculation

ASHRAE 2004 Air Cooled Chiller with condenser Minimum Efficiency 10.4066 IPLV

Number of Chillers 1

Chiller Make York

Model Number YCIV 0157 SA 46V ABS

Chiller Capacity 157 tons

Chiller Efficiency 13.2 IPLV

Weather File Location Cleveland Ohio

StrTemp	EndTemp	T(F)	Twb(F)	h(Btu/lba)	w(lbw/lba)	hrs1-8	hrs9-16	hrs17-24	hrs1-24	Chiller % Loaded OCC	Chiller % Loaded UNOCC	Proposed Cooling Energy kWh	Code Cooling Energy mmBtu	Savings (kWh)
95	99	95.7	73.6	37.1	0.0128	0	3	0	3	100%	50%	428.1818182	543.1168681	114.93505
90	94	91.9	75.6	39	0.0153	0	30	13	43	86%	39%	4419.702861	5606.065167	1186.362306
85	89	87.5	72.9	36.5	0.0141	1	92	34	127	73%	28%	10940.55482	13877.28207	2936.727253
80	84	82	69.2	33.6	0.0127	17	219	123	359	59%	16%	21778.13839	27623.95276	5845.814366
75	79	76.7	66.1	31.2	0.0117	46	303	174	523	46%	5%	21339.76376	27067.90707	5728.143303
70	74	72.4	64.5	30.1	0.0116	171	213	233	617	32%		9771.703407	12394.68078	2622.97737
65	69	68	61.6	28	0.0107	263	221	270	754	19%		5857.926053	7430.344579	1572.418526
60	64	62.5	56.8	24.8	0.009	403	275	351	1029	5%		1962.5	2489.285646	526.7856456
55	59	57.2	51.3	21.3	0.007	260	168	176	604					
50	54	51.9	46.4	18.5	0.0056	217	203	211	631					
45	49	47.6	42.9	16.5	0.0047	156	114	150	420					
40	44	42.8	39.5	14.7	0.0041	205	156	168	529					
35	39	37.4	35.4	12.6	0.0033	330	290	284	904					
30	34	32	31.3	10.5	0.0026	283	219	247	749					
25	29	27.5	27.9	8.8	0.0021	169	151	177	497					
20	24	23.2	24.9	7.4	0.0017	134	113	123	370					
15	19	17.5	21	5.6	0.0013	142	89	104	335					
10	14	12.2	17.7	4.1	0.0011	63	38	54	155					
5	9	7.7	14.8	2.8	0.0009	29	18	18	65					
0	4	2.7	11.5	1.4	0.0007	11	4	7	22					
-5	-1	-1.5	8.7	0.2	0.0005	17	1	3	21					
-10	-6	-5.1	6.4	-0.7	0.0005	3	0	0	3					
-15	-11	-13	-99	-99	-99	0	0	0	0					
-20	-16	-18	-99	-99	-99	0	0	0	0					
-25	-21	-23	-99	-99	-99	0	0	0	0					
-30	-26	-28	-99	-99	-99	0	0	0	0					
													Total Savings	20534.16382
													Rebate @ \$.08	\$ 1,642.73
													Rebate @ 75%	\$ 1,232.05



Ohio Edison • The Illuminating Company • Toledo Edison

Mercantile Customer Program - Custom Project Rebate Calculator

Project Name and Number:	Ashtabula Area City Schools 12-1432
Site Name:	Lakeside Elem Campus Bldg S
Completed by (Name):	Trace Searles
Date completed:	4/23/2012

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
Scheduled Chiller #1	20,534	1642.72
Total Project Energy Savings kWh	20,534	
Total Custom Prescriptive Rebate Amount \$		\$ 1,642.72

Notes about this rebate calculation:
Chiller make and model: York YCIV 0157 SA 46V ABS 157 ton chiller installed at building S with an IPLV of 13.2. The ASHRAE 2004 Air cooled chiller with condenser minimum efficiency is 10.4066 IPLV. Refer to Attachment F: AACS_LECS_Custom Chiller Calc_P3 for all savings calculations.

Lighting Inventory Form

Applicant Name:	Ashtabula Area City Schools
Facility Name:	Lakeside Elementary Campus (Building 5)
Date:	4/23/2012

Instructions: Please use one line for each fixture type in a room or area.

For existing or proposed control, choose OCC for Occupancy Sensor, DAYLTG for photosensor, or NONE for none. Controls must save energy to qualify.

The total of Column S, the quantities of CFLs and exit signs in Column M, and the quantities of sensors in Column R, will be used to calculate your incentive on the NonStandard Lighting form.

[illegible]

[illegible]

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	66,139
Total Change in Connected Load	8.90

Annual Estimated Cost Savings	\$6,613.90
Annual Operating Hours	2,080

Interior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$1,036.45
Exterior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Total retrofit CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	\$0.00
Total retrofit LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$1,375.00

Total Calculated Incentive	\$2,411.45
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Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	55
Total Quantity for Daylight Sensors	0

Please briefly describe how you estimated your coincidence factor (CF) and applicant equivalent full-load hours (EFLH) for facility type "Other" indicated on the Lighting Form tab

Demand Savings (For Internal Use Only)

6.80

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	Ashtabula Lakeside Elementary Campus Buildings SE and NE Lighting and Controls	Purchase and installation of new lighting materials for a newly constructed elementary school campus in Ashtabula, Ohio. A room by room area method was used in COMCheck to compare the newly installed lighting to ASHRAE code. Purchase and installation of occupancy controls for the newly installed lighting at the Ashtabula Elementary Campus is also included within this project.	A room by room area method was used in COMCheck to produce an allowed wattage based on ASHRAE code. This was compared to the wattage of the installed fixtures and savings was calculated as this difference plus the kwh saved from sensors. Attachment C is the countsheet, which shows the number of fixtures and sensors. The COMCheck is Attachment E. All numbers above and in the COMCheck report match those in the FE Lighting Rebate Calculator (AACS_LECSENE_Lighting Rebate Calculator_P1). All of the lighting fixture specification sheets can be found in Attachment I. The as-built lighting schedule is labeled as Attachment K. The occupancy sensor spec sheets are in Attachment J.	N/A	Higher efficiency products were sought after in order to produce greater energy savings that less efficient equipment would not produce.

Docket No. 13-0242

Site: 401 W. 44th Street

Exhibit 2

Customer Legal Entity Name: Ashtabula Area City Schools

Site Address: Ashtabula Elementary Lakeside Campus Buildings SE and NE

Principal Address: 401 W. 44th Street

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2011	528,520	528,520	528,520
Average	528,520	528,520	528,520

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) \$ <i>Note 2</i>
1	Ashtabula Lakeside Elementary Campus Buildings SE and NE Lighting and Controls	01/06/2012	\$203,200	\$101,600	121,011	121,011	-	\$4,516	\$3,387
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
		Total	\$203,200		121,011	121,011	0	\$4,516	\$3,387

Docket No. 13-0242

Site: 401 W. 44th Street

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.

**Commitment
Payment
\$**

\$0

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	121	\$ 308	\$ 37,305	\$ 4,050	\$3,387	\$0	\$ 7,437	5.0
Total	121	\$ 308	37,305	4,050	\$3,387	\$0	7,437	5.0

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)

Ashtabula Area City Schools ~ Ashtabula Elementary Lakeside Campus Buildings SE and NE

Docket No. 13-0242

Site: 401 W. 44th Street

Lighting Inventory Form

Applicant Name:	Ashtabula Area City Schools
Facility Name:	Lakeside Elementary Campus (Buildings SE and NE)
Date:	4/23/2012

Instructions: Please use one line for each fixture type in a room or area.

For existing or proposed control, choose OCC for Occupancy Sensor, DAYLITG for photosensor, or NONE for none. Controls must save energy to qualify.

The total of Column S, the quantities of CFLs and exit signs in Column M, and the quantities of sensors in Column R, will be used to calculate your incentive on the NonStandard Lighting form.

[illegible]

[illegible]

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	121,011
Total Change in Connected Load	15.16

Annual Estimated Cost Savings	\$12,101.10
Annual Operating Hours	2,080

Interior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$1,765.50
Exterior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Total retrofit CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	\$0.00
Total retrofit LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$2,750.00

Total Calculated Incentive	\$4,515.50
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Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	110
Total Quantity for Daylight Sensors	0

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	Ashtabula Lakeside Elementary Campus Buildings SW and NW Lighting and Controls	Purchase and installation of new lighting materials for a newly constructed elementary school campus in Ashtabula, Ohio. A room by room area method was used in COMCheck to compare the newly installed lighting to ASHRAE code. Purchase and installation of occupancy controls for the newly installed lighting at the Ashtabula Elementary Campus is also included in this project.	A room by room area method was used in COMCheck to produce an allowed wattage based on ASHRAE code. This was compared to the proposed wattage of the installed fixtures and savings was calculated as the difference. Attachment D is the countsheet, which shows the number of fixtures and sensors. The COMCheck can be viewed in Attachment E. All numbers above and in the COMCheck report match those in the First Energy Lighting Rebate Calculator (AACS_LECSWNW_Lighting Rebate Calculator_P1). Lighting fixture specification sheets can be found in Attachment I. The as-built lighting schedule is Attachment K. Occupancy sensor specifications can be found in Attachment J.	N/A	Higher efficiency products were sought after in order to produce greater energy savings that less efficient equipment would not produce.
2	Ashtabula Lakeside Elementary Campus Buildings SW and NW Chillers	Savings due to the installation of 2 York YCIV 0157 SA 46V ABS chillers.	Binned weather data was used to determine chiller runtimes which was then used calculate savings of the proposed chillers versus ASHRAE minimum compliant chillers. These calculations can be found in Attachment G. See Attachment H for the chiller specifications, including the IPLV listing. Attachment L is the as-built mechanical schedule for the elementary campus.	N/A	Higher efficiency chillers were chosen to produce energy savings that lower efficiency models would not produce.

Exhibit 2

Customer Legal Entity Name: Ashtabula Area City Schools

Site Address: Ashtabula Elementary Lakeside Campus Buildings SW and NW

Principal Address: 401 W. 44th Street

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) <i>Note 1</i>	
2011	528,520	528,520	528,520	
Average	528,520	528,520	528,520	

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) \$ <i>Note 2</i>
1	Ashtabula Lakeside Elementary Campus Buildings SW and NW Lighting and Controls	01/06/2012	\$203,200	\$101,600	135,759	135,759	-	\$5,470	\$4,103
2	Ashtabula Lakeside Elementary Campus Buildings SW and NW Chillers	03/28/2012	\$126,000	\$63,000	41,068	41,068	-	\$3,285	\$2,464
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
Total			\$329,200		176,827	176,827	0	\$8,755	\$6,566

Docket No. 13-0242

Site: 401 W. 44th Street

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.

**Commitment
Payment
\$**

\$0

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	136	\$ 308	\$ 41,852	\$ 2,025	\$4,103		\$ 6,128	6.8
2	41	\$ 308	\$ 12,660	\$ 2,025	\$2,464		\$ 4,489	2.82
Total	177	\$ 308	54,512	4,050	\$6,566	\$0	10,616	5.1

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)

Ashtabula Area City Schools ~ Ashtabula Elementary Lakeside Campus Buildings SW and NW

Docket No. 13-0242

Site: 401 W. 44th Street

Attachment G: Ashtabula Lakeside Elementary Campus Buildings SW and NW Chiller Savings Calcs

Custom Chiller Calculation

ASHRAE 2004 Air Cooled Chiller with condenser Minimum Efficiency 10.4066 IPLV

Number of Chillers 2

Chiller Make York

Model Number YCIV 0157 SA 46V ABS

Chiller Capacity 157 tons

Chiller Efficiency 13.2 IPLV

Weather File Location Cleveland Ohio

StrTemp	EndTemp	T(F)	Twb(F)	h(Btu/lba)	w(lbw/lba)	hrs1-8	hrs9-16	hrs17-24	hrs1-24	Chiller % Loaded OCC	Chiller % Loaded UNOCC	Proposed Cooling Energy kWh	Code Cooling Energy mmBtu	Savings (kWh)
95	99	95.7	73.6	37.1	0.0128	0	3	0	3	100%	50%	856.3636364	1086.233736	229.8700999
90	94	91.9	75.6	39	0.0153	0	30	13	43	86%	39%	8839.405722	11212.13033	2372.724612
85	89	87.5	72.9	36.5	0.0141	1	92	34	127	73%	28%	21881.10964	27754.56415	5873.454506
80	84	82	69.2	33.6	0.0127	17	219	123	359	59%	16%	43556.27678	55247.90552	11691.62873
75	79	76.7	66.1	31.2	0.0117	46	303	174	523	46%	5%	42679.52753	54135.81413	11456.28661
70	74	72.4	64.5	30.1	0.0116	171	213	233	617	32%		19543.40681	24789.36155	5245.95474
65	69	68	61.6	28	0.0107	263	221	270	754	19%		11715.85211	14860.68916	3144.837053
60	64	62.5	56.8	24.8	0.009	403	275	351	1029	5%		3925	4978.571291	1053.571291
55	59	57.2	51.3	21.3	0.007	260	168	176	604			Total Savings		41068.32764
50	54	51.9	46.4	18.5	0.0056	217	203	211	631			Rebate @ \$.08		\$ 3,285.47
45	49	47.6	42.9	16.5	0.0047	156	114	150	420			Rebate @ 75%		\$ 2,464.10
40	44	42.8	39.5	14.7	0.0041	205	156	168	529					
35	39	37.4	35.4	12.6	0.0033	330	290	284	904					
30	34	32	31.3	10.5	0.0026	283	219	247	749					
25	29	27.5	27.9	8.8	0.0021	169	151	177	497					
20	24	23.2	24.9	7.4	0.0017	134	113	123	370					
15	19	17.5	21	5.6	0.0013	142	89	104	335					
10	14	12.2	17.7	4.1	0.0011	63	38	54	155					
5	9	7.7	14.8	2.8	0.0009	29	18	18	65					
0	4	2.7	11.5	1.4	0.0007	11	4	7	22					
-5	-1	-1.5	8.7	0.2	0.0005	17	1	3	21					
-10	-6	-5.1	6.4	-0.7	0.0005	3	0	0	3					
-15	-11	-13	-99	-99	-99	0	0	0	0					
-20	-16	-18	-99	-99	-99	0	0	0	0					
-25	-21	-23	-99	-99	-99	0	0	0	0					
-30	-26	-28	-99	-99	-99	0	0	0	0					



Ohio Edison • The Illuminating Company • Toledo Edison

Mercantile Customer Program - Custom Project Rebate Calculator

Project Name and Number:	Ashtabula Area City Schools 12-1432
Site Name:	Lakeside Elem Campus Bldgs SW and
Completed by (Name):	Trace Searles
Date completed:	4/23/2012

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
Scheduled Chillers #4 and #5	41,068	3285.44
Total Project Energy Savings kWh	41,068	
Total Custom Prescriptive Rebate Amount \$		\$ 3,285.44

Notes about this rebate calculation:
Chiller make and model: York YCIV 0157 SA 46V ABS 157 ton chiller installed at buildings SW and NW with an IPLV of 13.2. The ASHRAE 2004 Air cooled chiller with condenser minimum efficiency is 10.4066 IPLV. Refer to Attachment G: AACS_LECS_Custom Chiller Calc_P3 for all savings calculations.

Lighting Inventory Form

Applicant Name:	Ashtabula Area City Schools
Facility Name:	Lakeside Elementary Campus (Buildings SW and NW)
Date:	4/23/2012

Instructions: Please use one line for each fixture type in a room or area.

For existing or proposed control, choose OCC for Occupancy Sensor, DAYLTG for photosensor, or NONE for none. Controls must save energy to qualify.

The total of Column S, the quantities of CFLs and exit signs in Column M, and the quantities of sensors in Column R, will be used to calculate your incentive on the NonStandard Lighting form.

[illegible]

[illegible]

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	135,759
Total Change in Connected Load	19.91

Annual Estimated Cost Savings	\$13,575.90
Annual Operating Hours	2,080

Interior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$2,319.60
Exterior Lighting Incentive @ \$0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	\$0.00
Total retrofit CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	\$0.00
Total retrofit LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$3,150.00

Total Calculated Incentive	\$5,469.60
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Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	126
Total Quantity for Daylight Sensors	0

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 Ashtabula Area City Schools, Taxpayer ID No. 34-6005875 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: vmnofziger@firstenergycorp.com

If to the Customer:

Ashtabula Local Schools
401 West 44th St.
Ashtabula, OH 44004
Attn: Bill Hill
Telephone: 440-993-2504
Fax:
Email: william.hill@neomin.org

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: John P. Dargatzis

Title: V.P. Of Energy Efficiency

Date: 1-23-13

Ashtabula Area City Schools_
(Customer)

By: William M. Mabel

Title: Treasurer/CEO

Date: 1/22/13

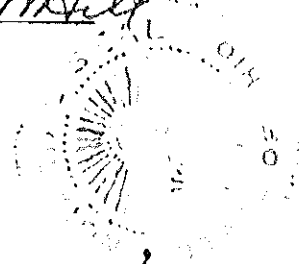
Affidavit of Ashtabula Area City Schools - Exhibit _A_

STATE OF OHIO)
) SS:
COUNTY OF Ashtabula)

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

1. I am the Treasurer of Ashtabula Area City Schools ("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.

William Hill


Sworn to before me and subscribed in my presence this 23rd day of Jan, 2013.

Kathy L. Didonato
Notary

KATHY L. DIDONATO, Notary Public
STATE OF OHIO
My Commission Expires August 8, 2013

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/20/2013 10:17:33 AM

in

Case No(s). 13-0242-EL-EEC

Summary: Application electronically filed by Ms. Lindsey E Sacher on behalf of Ashtabula Area City Schools and The Cleveland Electric Illuminating Company