Ohio | Public Utilities Commission

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

Case No.: 14-0362-EL-EEC

Mercantile Customer: Revere Local Schools

Electric Utility: Ohio Edison Company

Program Title or Description: Lighting and VFD Retrofits

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:Revere Local Schools

Principal address:3496 Everett Road, Richfield Ohio, 44333

Address of facility for which this energy efficiency program applies:1246 N. Cleveland-Massillon Rd. ; 3420 Everett Rd; 3195 Spring Valley Road; 3080 Revere Rd

Name and telephone number for responses to questions:David Forrest; 330.666.4155

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: Ohio Edison 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: 924,328 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: _____ 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?

7/31/2012

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

111 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 $_____. (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.

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

Case No.: 14-0362-EL-EEC

State of Ohio :

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

1. I am the duly authorized representative of:

   Revere Local 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.

CFO/TREASURER
Signature of Affiant & Title

Sworn and subscribed before me this 27 day of February, 2014 Month/Year

Signature of official administering oath

C. SANDRA WIERZBICKI, Notary Public
Residence - Summit County
State Wide Jurisdiction, Ohio
Print Name and Title
My Commission Expires August 31, 2014

My commission expires on August 31, 2014

Exhibit 1

Customer Legal Entity Name: Revere Local Schools

Site Address: Bath

Principal Address: 1246 N. Cleveland-Massillon Rd.

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 Controls	Lighting retrofit including upgrades to F28T8 lamps with electronic ballast. Interior metal halide fixtures replaced with new high bay fluorescent. Exterior fixtures upgraded to LED. Incandescent lamps replaced with fluorecent and compact fluorescent. Occupancy sensors and daylight sensors for addtional contol.	Lighting inventory was performed with pre & post ECM fixture consumption and demand utilized in school. Specified retrofits and replacements of the existing fixtures. Electrical Usage (kWh) = (Number of fixtures x watts per fixture x Operating hours). Electrical Demand (kWd) = (Number of fixtures x watts per fixture) ; Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached documentation for details. Measurement and Verification is based on IPMVP Option A. Calculations based on physical assessment of operational factors and commonly accepted usage assumptions.	Would be replaced as fixtures failed.	N/A
2	Pump VFD Installation	Install 7.5 HP VFDs for HW pumps.	Motor System inventory was performed with pre & post ECM consumption calculated and demand utilized . Specified equipment selection of the motors and motor controls. Electrical Usage (kWh) = Motor KWx Operating hours. New kWh Usage= Motor KW x Motor Speed ^3x Operating hours. Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached summary spreadsheet for details. Measurement and Verification is based on IPMVP Option A. Calculations attached with operational factors and commonly accepted usage assumptions.	N/A	N/A
3	Building Automation	Provide and install new Automated Logic WebCTRL components for systems outlined below. Bath Elementary: (1) CH&V Unit (21) CH&V Zone Dampers (1) Heating Hot Water System (2) Single-Zone Air-Handling Units (6) UV Day/Night Zones (3) Split AC Units (5) Unit Heaters / Cabinet Unit Heaters (13) Exhaust Fans (1) Gymnasium Lighting Control Panel (1) Outdoor Lighting Control Panel (1) Gas & Electric Meters Monitoring	The school was controlled by an outdated pneumatic control system. The upgrades in the school included a building automation upgrade. The temperature control and equipment schedules for all of the high school HVAC incuded in the narrative above will be tracked by the new building automation system. The equipment in the building will run reduced hours based on the schedule. In addtion, temperature control is implemented. The savings was calculated in a building simulation model performed in Market Manager software. The results of the model are based on 10 year normalized weather data and 8760 hours simulation.	N/A	N/A

Exhibit 2

Customer Legal Entity Name: Revere Local Schools

Site: Bath

Principal Address: 1246 N. Cleveland-Massillon Rd.

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C)	Note 1
2012	258,080	258,080	272,737	
2011	310,400	310,400	310,400	
2010	313,080	313,080	313,080	
Average	**293,853**	**293,853**	**298,739**	

Project Number	Project Name	In-Service Date	Project Cost $	KWh Saved/Year Counting towards Utility compliance	KWh Saved/Year (D) eligible for incentive	Utility Peak Demand Reduction Contribution, KW	Commitment Payment $
1	Lighting Retrofit and Controls	07/31/2012	$63,692	34,833	34,833	13	
2	Pump VFD Installation	07/31/2013	$4,465	9,223	9,223	-	
3	Building Automation	07/31/2013	$214,582	55,805	55,805	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
			Total	**99,861**	**99,861**	**13**	**$0**

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Site: 1246 N. Cleveland-Massillon Rd.

Savings as percent of usage **33.4%** Note 2

= Total (D) divided by Average (C)

Customer Eligible Exemption Period: **138 Month(s)** Note 3

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) Savings as a percent of usage is equal to the of total project savings (D) divided by the 3 year average Weather Adjusted Usage with Energy Efficiency Addbacks (C).

(3) Customer exemption determined by savings percentage in relation to energy efficiency schedule as set forth in O.R.C. 4928.66(A)(1)(a).

(4) The exemption period reflects the maximum potential exemption period. NOTE: The FirstEnergy Utilities cannot guarantee the length of the exemption period that will ultimately be approved by the Commission.

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	35	$ 308	$ 10,738	$ 1,350	$0	$348	$ 1,698	**6.3**
2	9	$ 308	$ 2,843	$ 1,350	$0	$92	$ 1,442	**1.97**
3	56	$ 308	$ 17,204	$ 1,350	$0	$558	$ 1,908	**9.02**
Total	**100**	**$ 308**	**30,785**	**4,050**	**$0**	**$999**	**5,049**	**6.1**

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)

Revere Local Schools ~ Bath
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Site: 1246 N. Cleveland-Massillon Rd.

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Annual**	**Savings**
Existing														
Electric (kWh)	36,000.00	34,880.00	30,720.00	22,720.00	27,680.00	18,060.00	18,720.00	12,480.00	27,680.00	29,920.00	29,280.00	25,600.00	**313,740.00**	
Demand (kW)	82.00	85.00	80.00	77.00	75.00	42.00	40.00	75.00	78.00	75.00	77.00	77.00	**85.00**	
Natural Gas (MCF)	768.00	865.00	326.00	239.00	107.00	0.00	11.00	12.00	17.00	304.00	370.00	847.00	**3,866.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Controls														
Electric (kWh)	31,611.00	30,204.80	26,228.80	18,411.60	21,653.10	11,682.00	12,329.80	8,301.30	21,614.50	29,047.70	24,668.20	22,182.40	**257,935.20**	**55,805 kWh**
Demand (kW)	83.50	86.60	81.50	78.50	75.20	42.10	40.10	75.20	78.10	75.70	78.50	78.40	**86.60**	
Natural Gas (MCF)	596.40	652.60	232.80	150.60	59.80	0.00	11.00	12.00	17.00	396.20	247.90	654.30	**3,030.60**	**835.4 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Plant														
Electric (kWh)	30,810.70	29,186.00	25,313.50	18,042.80	21,653.10	11,682.00	12,329.80	8,301.30	21,614.50	28,491.00	23,987.00	21,828.30	**253,240.00**	**4,695 kWh**
Demand (kW)	84.00	86.90	81.00	76.40	75.20	42.10	40.10	75.20	78.10	75.40	77.50	78.90	**86.90**	
Natural Gas (MCF)	546.20	574.10	237.90	127.00	59.80	0.00	11.00	12.00	17.00	321.30	215.10	576.00	**2,697.40**	**333.2 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

Lighting Form

Lighting Inventory Form

Applicant Name: Revere Schools

Facility Name: Bath Elementary

Date: 9/10/2013

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

For existing or proposed control, choose OCC for Occupany 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.

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION						Energy Calculations															
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
e.g.	*400 North Street*	*2*	*Office*	*Interior*	*Office - Small*	*Cooled Space*	*3*	*F44ILL*	*112*	*0.34*	*NONE*		*3*	*CFT55/1-BX*	*56*	*0.17*	*OCC*	*3*			*0.17*	*84%*	*84%*	*34%*	*12%*		*30%*			*0.19*	*2,808*	*3,435*	
e.g.	*Example*	*1*	*Restaurant*	*Exterior*	*Restaurant - Fast Food*	*Uncooled space*	*5*	*Example Cut Sheet 1*	*50*	*0.25*	*OCC*	*5*	*5*	*Example Cut Sheet 2*	*25*	*0.13*	*DAYLTG*	*5*		*0.13*		*88%*	*88%*			*30%*	*50%*		*0.11*		*8,760*	*4,156*	
1	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	162	F41ILL	31	5.02	NONE		162	F41SSILL	26	4.21	NONE		0.81				57%	34%	12%			0.62				2,080	1,887
2	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	20	F41ILL	31	0.62	NONE		20	F41SSILL	26	0.52	OCC		0.10				57%	34%	12%		30%	0.08				2,080	233
3	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	490	F42III	59	28.91	NONE		490	F42SSILL	48	23.52	NONE		5.39				57%	34%	12%			4.12				2,080	12,557
4	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	4	F42III	59	0.24	NONE		4	F42SSILL	48	0.19	OCC		0.04				57%	34%	12%		30%	0.03				2,080	103
5	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	3	I100/1	100	0.30	NONE		3	Cut Sheet 1	5	0.02	NONE		0.29				57%	34%	12%			0.22				2,080	664
6	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	8	I150/1	150	1.20	NONE		8	Cut Sheet 1	5	0.04	NONE		1.16				57%	34%	12%			0.89				2,080	2,702
7	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	10	I150/1	150	1.50	NONE		10	F41SSILL	26	0.26	NONE		1.24				57%	34%	12%			0.95				2,080	2,889
8	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	6	I150/1	150	0.90	NONE		6	F42SSILL	48	0.29	NONE		0.61				57%	34%	12%			0.47				2,080	1,426
9	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	2	I200/1	200	0.40	NONE		2	Cut Sheet 1	5	0.01	NONE		0.39				57%	34%	12%			0.30				2,080	909
10	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	1	I200/1	200	0.20	NONE		1	F41SSILL	26	0.03	NONE		0.17				57%	34%	12%			0.13				2,080	405
11	6 N. Cleveland-Massillon Rd.		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	3	MH250/1	295	0.89	NONE		3	Cut Sheet 3	60	0.18	NONE			0.71												3,833	
12	6 N. Cleveland-Massillon Rd.		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	4	MH400/1	458	1.83	NONE		4	Cut Sheet 2	80	0.32	NONE			1.51												3,833	
13	6 N. Cleveland-Massillon Rd.		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	5	HPS400/1	465	2.33	NONE						NONE															3,833	
14	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	3	I100/1	100	0.30	NONE		3	Cut Sheet 5	13	0.04	NONE		0.26				57%	34%	12%			0.20				2,080	608
15	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	2	I200/1	200	0.40	NONE		2	F41SSILL	26	0.05	NONE		0.35				57%	34%	12%			0.27				2,080	811
16	6 N. Cleveland-Massillon Rd.		School	Interior	Education - Primary School	Cooled Space	1	I200/1	200	0.20	NONE		1	F44SSILL	96	0.10	NONE		0.10				57%	34%	12%			0.08				2,080	242
17	6 N. Cleveland-Massillon Rd.		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	3	HPS70/1	95	0.29	NONE		3	Cut Sheet 6	60	0.18	NONE			0.11												3,833	
18											NONE						NONE																
19											NONE						NONE																
20											NONE						NONE																
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Lighting Form

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION																												
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity W/when applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DATA,TG, OCC or NONE.	Proposed Sensor Quantity W/when applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)												
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Totals							727			45.52			722			29.95			10.92	2.32								8.34					25,435										

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	34,833
Total Change in Connected Load	13.24

Annual Estimated Cost Savings	$3,483.30
Annual Operating Hours	2,492

Interior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$1,271.75
Exterior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$445.00
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)	$0.00

Total Calculated Incentive	$1,716.75

Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	722
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	0
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)	8.34

Revere HW Pump VFD Calculation

HWP **Base Projected without VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	100%	2,520	100%	15	1	93%	12.0	30,321
	0%	0	100%	0	0		0.0	0
TOTAL	100%	2,520						30,321

HWP **with VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	15%	378	50%	15	1	93%	1.5	569
	20%	504	60%	15	1	93%	2.6	1,310
	30%	756	70%	15	1	93%	4.1	3,120
	20%	504	80%	15	1	93%	6.2	3,105
	10%	252	90%	15	1	93%	8.8	2,210
	5%	126	100%	15	1	93%	12.4	1,562
TOTAL	100%	2,520						11,875

18,446 KWH SAVED
61% % Saved

Exhibit 1

Customer Legal Entity Name: Revere Local Schools

Site Address: Hillcrest
Principal Address: 3080 Revere Rd

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 Controls	Lighting retrofit including upgrades to F28T8 lamps with electronic ballast. Interior metal halide fixtures replaced with new high bay fluorescent. Exterior fixtures upgraded to LED. Incandescent lamps replaced with fluorecent and compact fluorescent. Occupancy sensors and daylight sensors for addtional contol.	Lighting inventory was performed with pre & post ECM fixture consumption and demand utilized in school. Specified retrofits and replacements of the existing fixtures. Electrical Usage (kWh) = (Number of fixtures x watts per fixture x Operating hours). Electrical Demand (kWd) = (Number of fixtures x watts per fixture) ; Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached documentation for details. Measurement and Verification is based on IPMVP Option A. Calculations based on physical assessment of operational factors and commonly accepted usage assumptions.	Would be replaced as fixtures failed.	N/A
2	Pump VFD Installation	Install 15 HP VFDs for HW pumps.	Motor System inventory was performed with pre & post ECM consumption calculated and demand utilized . Specified equipment selection of the motors and motor controls. Electrical Usage (kWh) = Motor KWx Operating hours. New kWh Usage= Motor KW x Motor Speed ^3x Operating hours. Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached summary spreadsheet for details. Measurement and Verification is based on IPMVP Option A. Calculations attached with operational factors and commonly accepted usage assumptions.	N/A	N/A
3	Building Automation	Provide and install new Automated Logic WebCTRL components for systems outlined below. Hillcrest Elementary: (1) Heating Hot Water System (3) VVT Air-Handling Units (27) VVT Terminals (2) VVT Rooftop Units (3) Single-Zone Air-Handling Units (1) Kitchen Make-up Air Unit (6) Unit Ventilators (19) Fan-Coil Units (6) UV Day/Night Zones (3) Unit Heaters / Cabinet Unit Heaters (14) Exhaust Fans (1) Gymnasium Lighting Control Panel (1) Outdoor Lighting Control Panel	The school was controlled by an outdated pneumatic control system. The upgrades in the school included a building automation upgrade. The temperature control and equipment schedules for all of the high school HVAC incuded in the narrative above will be tracked by the new building automation system. The equipment in the building will run reduced hours based on the schedule. In addtion, temperature control is implemented. The savings was calculated in a building simulation model performed in Market Manager software. The results of the model are based on 10 year normalized weather data and 8760 hours simulation.	N/A	N/A

Exhibit 2

Customer Legal Entity Name: Revere Local Schools
Site: Hillcrest
Principal Address: 3080 Revere Rd

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C)	Note 1
2012	432,640	432,640	470,463	
2011	593,760	593,760	593,760	
2010	579,040	579,040	579,040	
Average	**535,147**	**535,147**	**547,754**	

Project Number	Project Name	In-Service Date	Project Cost $	KWh Saved/Year Counting towards Utility compliance	KWh Saved/Year (D) eligible for incentive	Utility Peak Demand Reduction Contribution, KW	Commitment Payment $
1	Lighting Retrofit and Controls	07/31/2012	$228,516	89,891	89,891	28	
2	Pump VFD Installation	07/31/2013	$4,465	18,446	18,446	-	
3	Building Automation	07/31/2013	$383,011	160,393	160,393	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
			Total	**268,730**	**268,730**	**28**	**$0**

Docket No. 14-0362

Site: 3080 Revere Rd

Savings as percent of usage = Total (D) divided by Average (C) **49.1%** Note 2

Customer Eligible Exemption Period: **138 Month(s)** Note 3

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) Savings as a percent of usage is equal to the of total project savings (D) divided by the 3 year average Weather Adjusted Usage with Energy Efficiency Addbacks (C).

(3) Customer exemption determined by savings percentage in relation to energy efficiency schedule as set forth in O.R.C. 4928.66(A)(1)(a).

(4) The exemption period reflects the maximum potential exemption period. NOTE: The FirstEnergy Utilities cannot guarantee the length of the exemption period that will ultimately be approved by the Commission.

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	90	$ 308	$ 27,712	$ 1,350	$0	$899	$ 2,249	**12.3**
2	18	$ 308	$ 5,687	$ 1,350	$0	$184	$ 1,534	**3.71**
3	160	$ 308	$ 49,446	$ 1,350	$0	$1,604	$ 2,954	**16.74**
Total	**269**	**$ 308**	**82,844**	**4,050**	**$0**	**$2,687**	**6,737**	**12.3**

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)

Revere Local Schools ~ Hillcrest
Docket No. 14-0362

Site: 3080 Revere Rd

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Annual**	**Savings**
Existing														
Electric (kWh)	51,200.00	66,240.00	54,880.00	50,400.00	42,560.00	40,480.00	35,680.00	37,600.00	50,400.00	48,480.00	55,520.00	49,920.00	**583,360.10**	
Demand (kW)	138.00	149.00	147.00	140.00	140.00	133.00	133.00	130.00	137.00	134.00	134.00	138.00	**149.00**	
Natural Gas (MCF)	1,415.00	1,011.00	862.00	282.00	130.00	0.00	3.00	2.00	178.00	289.00	417.00	692.00	**5,281.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
Lighting														
Electric (kWh)	40,295.40	51,803.30	42,722.00	39,897.80	33,310.90	39,311.50	34,854.60	36,900.60	39,150.20	38,250.00	43,249.60	39,509.80	**479,255.60**	**104,105 kWh**
Demand (kW)	104.80	113.10	111.60	110.10	108.20	130.00	131.60	128.70	106.90	103.30	101.70	104.80	**131.60**	
New Control														
Electric (kWh)	34,076.80	44,058.50	34,777.10	28,404.90	21,740.70	10,953.00	10,014.10	10,209.90	27,206.30	29,373.20	34,844.90	33,203.10	**318,862.50**	**160,393 kWh**
Demand (kW)	104.80	113.10	111.60	110.40	108.60	54.40	55.50	53.20	107.30	105.40	101.70	104.80	**113.10**	
Natural Gas (MCF)	1,328.50	914.90	698.50	249.80	31.60	0.00	3.00	2.00	190.30	282.80	315.80	652.50	**4,669.70**	**611 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Plant														
Electric (kWh)	31,246.60	41,180.80	33,192.50	27,468.30	21,620.90	10,953.50	10,014.20	10,209.90	27,156.90	27,777.30	33,252.70	30,397.30	**304,470.90**	**14,392 kWh**
Demand (kW)	134.40	139.50	140.00	133.70	129.50	104.80	105.40	101.60	126.30	124.30	124.90	133.90	**140.00**	
Natural Gas (MCF)	1,047.20	713.20	535.00	152.40	17.70	0.00	3.00	2.00	125.70	149.40	245.50	511.40	**3,502.50**	**1,167 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
														303
Windows 5														
Electric (kWh)	31,246.40	41,180.80	33,192.50	27,468.30	21,619.90	10,952.50	10,013.20	10,207.90	27,155.90	27,777.30	33,252.70	30,397.30	**304,464.70**	**6 kWh**
Demand (kW)	134.40	139.50	140.00	133.70	129.50	104.80	105.40	101.60	126.30	124.30	124.90	133.90	**140.00**	
Natural Gas (MCF)	1,044.20	713.20	535.00	152.40	17.70	0.00	3.00	2.00	125.70	149.40	243.50	510.40	**3,496.50**	**6 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

Lighting Form

Lighting Inventory Form

Applicant Name: Revere Schools

Facility Name: Hillcrest Elementary

Date: 9/10/2013

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

For existing or proposed control, choose OCC for Occupany 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.

PROJECT BASIC INFORMATION							PRE-INSTALLATION					POST-INSTALLATION												Energy Calculations								
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
e.g.	*400 North Street*	*2*	*Office*	*Interior*	*Office - Small*	*Cooled Space*	*3*	*F44ILL*	*112*	*0.34*	*NONE*		*3*	*CFT55/1-BX*	*56*	*0.17*	*OCC*	*3*			*0.17*	*84%*	*84%*	*34%*	*12%*		*30%*			*0.19*	*2,808*	*3,435*	
e.g.	*Example*	*1*	*Restaurant*	*Exterior*	*Restaurant - Fast Food*	*Uncooled space*	*5*	*Example Cut Sheet 1*	*50*	*0.25*	*OCC*	*5*	*5*	*Example Cut Sheet 2*	*25*	*0.13*	*DAYLTG*	*5*		*0.13*		*88%*	*88%*			*30%*	*50%*		*0.11*		*8,760*	*4,156*	
1	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	9	F42LL	59	0.53	NONE		9	F41SS/LL	26	0.23	NONE		0.30				57%	34%	12%			0.23				2,080	692
2	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	742	F42LL	59	43.78	NONE		742	F42SS/LL	48	35.62	NONE		8.16				57%	34%	12%			6.23				2,080	19,014
3	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	35	F42ill	59	2.07	NONE		76	F41SS/LL	26	1.98	NONE		0.09				57%	34%	12%			0.07				2,080	207
4	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	35	F42ill	59	2.07	NONE		35	F42SS/LL	48	1.68	OCC		0.39				57%	34%	12%		30%	0.29				2,080	897
5	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	6	I75/1	75	0.45	NONE		6	Cut Sheet 1	5	0.03	NONE		0.42				57%	34%	12%			0.32				2,080	978
6	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	12	F43LL	89	1.07	NONE		12	F43SILL	78	0.94	NONE		0.13				57%	34%	12%			0.10				2,080	308
7	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	10	I150/1	150	1.50	NONE		10	F42SS/LL	48	0.48	NONE		1.02				57%	34%	12%			0.78				2,080	2,376
8	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	12	mh200/1	232	2.78	NONE		12	F42SS/LL	48	0.58	DAYLTG		2.21				57%	34%	12%		50%	1.69				2,080	5,144
9	3080 Revere Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	12	mh250/1	295	3.54	NONE		12	Cut Sheet 3	75	0.90	NONE			2.64												3,833	
10	3080 Revere Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	11	MH400/1	458	5.04	NONE		11	Cut Sheet 2	101	1.11	NONE			3.93												3,833	
11	3080 Revere Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	5	MH400/1	458	2.29	NONE		5	Cut Sheet 6	202	1.01	NONE			1.28												3,833	
12	3080 Revere Rd		School	Interior	Education - Primary School	Cooled Space	24	MH400/1	458	10.99	NONE		24	F48LL	224	5.38	DAYLTG		5.62				57%	34%	12%		50%	4.29				2,080	13,083
13	3080 Revere Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	10	MH250/1	295	2.95	NONE		10	Cut Sheet 7	60	0.60	NONE			2.35												3,833	
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Lighting Form

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION						Energy Calculations														
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
139											NONE						NONE																
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Totals							923			79.05			964			50.53			18.33	10.20								14.00					42,699

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	89,891
Total Change in Connected Load	28.53

Annual Estimated Cost Savings	$8,989.10
Annual Operating Hours	2,619

Interior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$2,134.95
Exterior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$1,954.25
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)	$0.00

Total Calculated Incentive	$4,089.20

Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	964
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	0
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)	14.00

Revere HW Pump VFD Calculation

HWP **Base Projected without VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	100%	2,520	100%	15	1	93%	12.0	30,321
	0%	0	100%	0	0		0.0	0
TOTAL	100%	2,520						30,321

HWP **with VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	15%	378	50%	15	1	93%	1.5	569
	20%	504	60%	15	1	93%	2.6	1,310
	30%	756	70%	15	1	93%	4.1	3,120
	20%	504	80%	15	1	93%	6.2	3,105
	10%	252	90%	15	1	93%	8.8	2,210
	5%	126	100%	15	1	93%	12.4	1,562
TOTAL	100%	2,520						11,875

18,446 KWH SAVED
61% % Saved

Exhibit 1

Customer Legal Entity Name: Revere Local Schools

Site Address: HS

Principal Address: 3420 Everett Rd

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 Controls	Lighting retrofit including upgrades to F28T8 lamps with electronic ballast. Interior metal halide fixtures replaced with new high bay fluorescent. Exterior fixtures upgraded to LED. Incandescent lamps replaced with fluorecent and compact fluorescent. Occupancy sensors and daylight sensors for addtional contol.	Lighting inventory was performed with pre & post ECM fixture consumption and demand utilized in school. Specified retrofits and replacements of the existing fixtures. Electrical Usage (kWh) = (Number of fixtures x watts per fixture x Operating hours). Electrical Demand (kWd) = (Number of fixtures x watts per fixture) ; Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached documentation for details. Measurement and Verification is based on IPMVP Option A. Calculations based on physical assessment of operational factors and commonly accepted usage assumptions.	Would be replaced as fixtures failed.	N/A
2	Pump VFD Installation	Install 15 HP VFDs for HW pumps.	Motor System inventory was performed with pre & post ECM consumption calculated and demand utilized . Specified equipment selection of the motors and motor controls. Electrical Usage (kWh) = Motor KWx Operating hours. New kWh Usage= Motor KW x Motor Speed ^3x Operating hours. Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached summary spreadsheet for details. Measurement and Verification is based on IPMVP Option A. Calculations attached with operational factors and commonly accepted usage assumptions.	N/A	N/A
3	Building Automation	Provide and install new Automated Logic WebCTRL components for systems outlined below. High School: (1) Heating Hot Water System, (8) Science Wing Air-Handling Units, (16) Single-Zone Air-Handling Units (3) Gymnasium Air-Handling Units, (3) VAV Air-Handling Units, (7) VAV Terminals, (19) FPVAV Terminals, (4) Science Lab Supply Fan Terminals, (1) Fan-Coil Unit, (4) Science Addition Unit Ventilators, (6) UV Day/Night Zone, (18) Split AC Units,(25) Unit Heaters / Cabinet Unit Heaters,(24) Exhaust Fans,(1) Gymnasium Lighting Control Panel,(1) Outdoor Lighting Control Panel,(1) Gas & Electric Meters Monitoring	The main high school was controlled by an outdated pneumatic control system. The upgrades in the High School included a building automation upgrade. The temperature control and equipment schedules for all of the high school HVAC incuded in the narrative above will be tracked by the new building automation system. The equipment in the building will run reduced hours based on the schedule. In addtion, temperature control is implemented. The savings was calculated in a building simulation model performed in Market Manager software. The results of the model are based on 10 year normalized weather data and 8760 hours simulation.	N/A	N/A

Exhibit 2

Customer Legal Entity Name: Revere Local Schools
Site: HS
Principal Address: 3420 Everett Rd

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C)	Note 1
2012	1,012,400	1,012,400	1,076,362	
2011	1,391,240	1,391,240	1,391,240	
2010	1,431,600	1,431,600	1,431,600	
Average	**1,278,413**	**1,278,413**	**1,299,734**	

Project Number	Project Name	In-Service Date	Project Cost $	KWh Saved/Year Counting towards Utility compliance	KWh Saved/Year (D) eligible for incentive	Utility Peak Demand Reduction Contribution, KW	Commitment Payment $
1	Lighting Retrofit and Controls	07/31/2012	$228,516	152,013	152,013	40	
2	Pump VFD Installation	07/31/2013	$1,365	18,446	18,446	-	
3	Building Automation	07/31/2013	$383,011	191,691	191,691	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
			Total	**362,150**	**362,150**	**40**	**$0**

Docket No. 14-0362

Site: 3420 Everett Rd

Savings as percent of usage = Total (D) divided by Average (C) **27.9%** Note 2

Customer Eligible Exemption Period: **138 Month(s)** Note 3

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) Savings as a percent of usage is equal to the of total project savings (D) divided by the 3 year average Weather Adjusted Usage with Energy Efficiency Addbacks (C).

(3) Customer exemption determined by savings percentage in relation to energy efficiency schedule as set forth in O.R.C. 4928.66(A)(1)(a).

(4) The exemption period reflects the maximum potential exemption period. NOTE: The FirstEnergy Utilities cannot guarantee the length of the exemption period that will ultimately be approved by the Commission.

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	152	$ 308	$ 46,863	$ 1,350	$0	$1,520	$ 2,870	**16.3**
2	18	$ 308	$ 5,687	$ 1,350	$0	$184	$ 1,534	**3.71**
3	192	$ 308	$ 59,095	$ 1,350	$0	$1,917	$ 3,267	**18.09**
Total	**362**	**$ 308**	**111,644**	**4,050**	**$0**	**$3,622**	**7,672**	**14.6**

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)

Revere Local Schools ~ HS
Docket No. 14-0362

Site: 3420 Everett Rd

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	**Annual**	**Savings**
Existing														
Electric (kWh)	130,294.00	142,682.00	127,054.00	126,056.00	133,124.00	118,119.00	107,540.00	117,129.00	141,712.00	133,732.00	149,938.00	115,777.00	**1,543,157.20**	
Demand (kW)	219.70	212.70	213.10	242.50	229.40	232.40	228.60	254.60	239.60	225.70	234.60	212.90	**254.60**	
Natural Gas (MCF)	2,152.00	1,035.00	573.00	63.00	53.00	14.00	10.00	4.00	10.00	120.00	169.00	1,433.00	**5,636.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Controls														
Electric (kWh)	106,439.80	133,063.80	110,549.10	103,876.40	112,198.60	110,751.40	98,278.50	113,517.20	115,420.40	110,976.20	142,428.80	93,965.90	**1,351,465.90**	**191,691 kWh**
Demand (kW)	230.90	251.30	224.00	257.30	251.90	309.60	325.40	339.00	256.60	234.40	280.10	221.90	**339.00**	
Natural Gas (MCF)	1,785.50	841.60	457.40	54.50	43.80	6.40	6.50	2.40	4.00	92.40	138.60	1,179.10	**4,612.20**	**1,024 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
	1,785.50	841.60	457.40	54.50	43.80	6.40	6.50	2.40	4.00	92.40	138.60	1,179.10		
New Windows														
Electric (kWh)	106,439.80	133,063.80	110,549.10	103,876.40	112,198.60	110,751.40	98,278.50	113,517.20	115,420.40	110,976.20	142,428.80	93,965.90	**1,351,465.90**	**0.00 kWh**
Demand (kW)	230.90	251.30	224.00	257.30	251.90	309.60	325.40	339.00	256.60	234.40	280.10	221.90	**339.00**	
Natural Gas (MCF)	1,752.90	820.40	440.10	54.50	43.80	6.40	6.50	2.40	4.00	92.40	122.10	1,140.00	**4,485.50**	**127 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

Lighting Form

Lighting Inventory Form

Applicant Name: Revere Schools

Facility Name: Revere MS

Date: 9/10/2013

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

For existing or proposed control, choose OCC for Occupany 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.

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION					
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable
e.g.	*400 North Street*	*2*	*Office*	*Interior*	*Office - Small*	*Cooled Space*	*3*	*F44ILL*	*112*	*0.34*	*NONE*		*3*	*CFT55/1-BX*	*56*	*0.17*	*OCC*	*3*
e.g.	*Example*	*1*	*Restaurant*	*Exterior*	*Restaurant - Fast Food*	*Uncooled space*	*5*	*Example Cut Sheet 1*	*50*	*0.25*	*OCC*	*5*	*5*	*Example Cut Sheet 2*	*25*	*0.13*	*DAYLTG*	*5*
1	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	246	F41ILL	31	7.63	NONE		246	F41SSILL	26	6.40	NONE	
2	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	868	F42lll	59	51.21	NONE		868	F42SSILL	48	41.66	NONE	
3	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	1	I60/1	60	0.06	NONE		1	Cut Sheet 1	5	0.01	NONE	
4	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	77	F44ILL	112	8.62	NONE		77	F44SSILL	96	7.39	NONE	
5	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	5	MH50/1	72	0.36	NONE		5	F42SSILL	48	0.24	DAYLTG	
6	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	24	MH250/1	295	7.08	NONE		24	F43lll	89	2.14	DAYLTG	
7	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	4	F44lll	112	0.45	NONE		4	F44SSILL	96	0.38	DAYLTG	
8	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	23	MH400/1	458	10.53	NONE		48	F48ILL	224	10.75	NONE	
9	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	9	F41ILL	31	0.28	NONE		9	F41SSILL	26	0.23	OCC	
10	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	75	F42lll	59	4.43	NONE		75	F42SSILL	48	3.60	OCC	
11	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	3	F43lll	89	0.27	NONE		3	F43SSILL	72	0.22	OCC	
12	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	36	CFQ26/1	33	1.19	NONE		36	Cut sheet 9	18	0.65	NONE	
13	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	9	CFQ18/2	45	0.41	NONE		9	CFQ15/1	20	0.18	NONE	
14	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	49	I40/1	40	1.96	NONE						NONE	
15	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	22	MH35/1	44	0.97	NONE		22	Cut Sheet 10	6	0.13	NONE	
16	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	636	F42lll	59	37.52	NONE		636	F42SSILL	48	30.53	OCC	
17	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	9	I60/1	60	0.54	NONE		9	Cut Sheet 1	5	0.05	DAYLTG	
18	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	9	I65/1	65	0.59	NONE		9	Cut Sheet 9	18	0.16	NONE	
19	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	10	F43ILL	89	0.89	NONE						NONE	
20	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	8	I100/1	100	0.80	NONE		8	Cut Sheet 1	5	0.04	NONE	
21	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	1	F44ILL	112	0.11	NONE		1	F44SSILL	96	0.10	NONE	
22	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	4	I60/1	60	0.24	NONE		2	F42SSILL	48	0.10	NONE	
23	3420 Everett Rd		School	Interior	Other - Please estimate CF and EFLH	Cooled Space	20	MH400/1	458	9.16	NONE		20	F48ILL	224	4.48	NONE	
24	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	10	MH250/1	295	2.95	NONE		10	Cut Sheet 2	101	1.01	NONE	
25	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	1	I40/1	40	0.04	NONE		1	Cut Sheet 1	5	0.01	NONE	
26	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	11	MH150/1	190	2.09	NONE		11	Cut Sheet 3	60	0.66	NONE	
27	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	7	Mh150/1	190	1.33	NONE		7	Cut Sheet 8	77	0.54	NONE	
28	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	6	Mh250/1	295	1.77	NONE		6	Cut Sheet 11	90	0.54	NONE	
29	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	9	Mh70/1	95	0.86	NONE		9	Cut Sheet 12	50	0.45	NONE	
30	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	1	Mh400/1	458	0.46	NONE		1	Cut Sheet 11	90	0.09	NONE	
31	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	3	HPS150/1	188	0.56	NONE		3	Cut Sheet 8	77	0.23	NONE	
32	3420 Everett Rd		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	2	HPS250/1	295	0.59	NONE		2	Cut Sheet 11	90	0.18	NONE	
33											NONE						NONE	
34											NONE						NONE	
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Line Item	Energy Calculations														
	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
e.g.			*0.17*	*84%*	*84%*	*34%*	*12%*		*30%*			*0.19*	*2,808*	*3,435*	
e.g.		*0.13*		*88%*	*88%*			*30%*	*50%*		*0.11*		*8,760*	*4,156*	
1	1.23			90%	90%	34%	12%			1.48			2,500	2,500	3,444
2	9.55			90%	90%	34%	12%			11.51			2,500	2,500	26,734
3	0.06			90%	90%	34%	12%			0.07			2,500	2,500	154
4	1.23			90%	90%	34%	12%			1.49			2,500	2,500	3,450
5	0.12			90%	90%	34%	12%		50%	0.14			2,500	2,500	336
6	4.94			90%	90%	34%	12%		50%	5.96			2,500	2,500	13,843
7	0.06			90%	90%	34%	12%		50%	0.08			2,500	2,500	179
8	-0.22			90%	90%	34%	12%			-0.26			2,500	2,500	-610
9	0.05			90%	90%	34%	12%		30%	0.05			2,500	2,500	126
10	0.83			90%	90%	34%	12%		30%	0.99			2,500	2,500	2,310
11	0.05			90%	90%	34%	12%		30%	0.06			2,500	2,500	143
12	0.54			90%	90%	34%	12%			0.65			2,500	2,500	1,512
13			0.23	90%	90%	34%	12%					0.27	2,500	2,500	
14				90%	90%								2,500	2,500	
15	0.84			90%	90%	34%	12%			1.01			2,500	2,500	2,341
16	7.00			90%	90%	34%	12%		30%	8.44			2,500	2,500	19,589
17	0.50			90%	90%	34%	12%		50%	0.60			2,500	2,500	1,386
18	0.42			90%	90%	34%	12%			0.51			2,500	2,500	1,184
19				90%	90%								2,500	2,500	
20	0.76			90%	90%	34%	12%			0.92			2,500	2,500	2,128
21	0.02			90%	90%	34%	12%			0.02			2,500	2,500	45
22	0.14			90%	90%	34%	12%			0.17			2,500	2,500	403
23	4.68			90%	90%	34%	12%			5.64			2,500	2,500	13,104
24		1.94												3,833	
25		0.04												3,833	
26		1.43												3,833	
27		0.79												3,833	
28		1.23												3,833	
29		0.41												3,833	
30		0.37												3,833	
31		0.33												3,833	
32		0.41												3,833	

Lighting Form

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION						Energy Calculations														
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
139											NONE						NONE																
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Totals							2,198			155.93			2,162			113.13			32.79	6.94	0.23							39.54		0.27			91,801

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	152,013
Total Change in Connected Load	39.96

Annual Estimated Cost Savings	$15,201.30
Annual Operating Hours	2,875

Interior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$4,590.05
Exterior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$1,330.45
Total retrofit CFL Incentive @ $1/screw-in CFL lamp; $15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	$135.00
Total retrofit LED Exit Incentive @ $10/exit sign	$0.00
Total Lighting Controls Incentive @ $25/sensor (includes all Lighting Controls, both interior and exterior)	$0.00

Total Calculated Incentive	$6,055.50

Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	2153
Total Lamp Quantity for retrofit Screw-In CFLs	0
Total Lamp Quantity for retrofit Hard-Wired CFLs	9
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	0
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)	39.81

Revere HW Pump VFD Calculation

HWP **Base Projected without VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	100%	2,520	100%	15	1	93%	12.0	30,321
	0%	0	100%	0	0		0.0	0
TOTAL	100%	2,520						30,321

HWP **with VFD**

	RUN TIME	HOURS	SPEED	Total HP	MOTORS	Motor Eff	KW	KWH
	15%	378	50%	15	1	93%	1.5	569
	20%	504	60%	15	1	93%	2.6	1,310
	30%	756	70%	15	1	93%	4.1	3,120
	20%	504	80%	15	1	93%	6.2	3,105
	10%	252	90%	15	1	93%	8.8	2,210
	5%	126	100%	15	1	93%	12.4	1,562
TOTAL	100%	2,520						11,875

18,446 KWH SAVED
61% % Saved

Exhibit 1

Customer Legal Entity Name: Revere Local Schools

Site Address: MS

Principal Address: 3195 Spring Valley 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	Lighting Retrofit and Controls	Lighting retrofit including upgrades to F28T8 lamps with electronic ballast. Interior metal halide fixtures replaced with new high bay fluorescent. Exterior fixtures upgraded to LED. Incandescent lamps replaced with fluorecent and compact fluorescent. Occupancy sensors and daylight sensors for addtional contol.	Lighting inventory was performed with pre & post ECM fixture consumption and demand utilized in school. Specified retrofits and replacements of the existing fixtures. Electrical Usage (kWh) = (Number of fixtures x watts per fixture x Operating hours). Electrical Demand (kWd) = (Number of fixtures x watts per fixture) ; Electrical Energy Cost = (kWh x $/kwh) ; Existing KWh - Retrofit KWh = Savings. See attached documentation for details. Measurement and Verification is based on IPMVP Option A. Calculations based on physical assessment of operational factors and commonly accepted usage assumptions.	Would be replaced as fixtures failed.	N/A
2	Building Automation	Provide and install new Automated Logic WebCTRL components for systems outlined below. Middle School: (1) Heating Hot Water System (6) Science Wing Air-Handling Units (13) Single-Zone Air-Handling Units (3) Single-Zone Rooftop Units (6) UV Day/Night Zones (6) Split AC Units (12) Unit Heaters / Cabinet Unit Heaters (14) Exhaust Fans (1) Gymnasium Lighting Control Panel (1) Outdoor Lighting Control Panel (1) Gas & Electric Meters Monitoring	The school was controlled by an outdated pneumatic control system. The upgrades in the school included a building automation upgrade. The temperature control and equipment schedules for all of the school HVAC incuded in the narrative above will be tracked by the new building automation system. The equipment in the building will run reduced hours based on the schedule. In addtion, temperature control is implemented. The savings was calculated in a building simulation model performed in Market Manager software. The results of the model are based on 10 year normalized weather data and 8760 hours simulation.	N/A	N/A

Exhibit 2

Customer Legal Entity Name: Revere Local Schools
Site: MS
Principal Address: 3195 Spring Valley Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C)	Note 1
2012	653,760	653,760	696,986	
2011	765,120	765,120	765,120	
2010	656,960	656,960	656,960	
Average	**691,947**	**691,947**	**706,355**	

Project Number	Project Name	In-Service Date	Project Cost $	KWh Saved/Year Counting towards Utility compliance	KWh Saved/Year (D) eligible for incentive	Utility Peak Demand Reduction Contribution, KW	Commitment Payment $
1	Lighting Retrofit and Controls	07/31/2012	$164,364	102,732	102,732	30	
2	Building Automation	07/31/2013	$385,820	90,855	90,855	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
			Total	**193,587**	**193,587**	**30**	**$0**

Docket No. 14-0362

Site: 3195 Spring Valley Road

Savings as percent of usage **27.4%** Note 2
= Total (D) divided by Average (C)

Customer Eligible Exemption Period: **138 Month(s)** Note 3

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) Savings as a percent of usage is equal to the of total project savings (D) divided by the 3 year average Weather Adjusted Usage with Energy Efficiency Addbacks (C).

(3) Customer exemption determined by savings percentage in relation to energy efficiency schedule as set forth in O.R.C. 4928.66(A)(1)(a).

(4) The exemption period reflects the maximum potential exemption period. NOTE: The FirstEnergy Utilities cannot guarantee the length of the exemption period that will ultimately be approved by the Commission.

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	103	$ 308	$ 31,670	$ 2,025	$0	$1,027	$ 3,052	**10.4**
2	91	$ 308	$ 28,009	$ 2,025	$0	$909	$ 2,934	**9.55**
Total	**194**	**$ 308**	**59,679**	**4,050**	**$0**	**$1,936**	**5,986**	**10.0**

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)

Revere Local Schools ~ MS
Docket No. 14-0362

Site: 3195 Spring Valley Road

CCG Energy Solutions — *Revere High School*

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Savings
Existing														
Electric (kWh)	130,294.00	142,682.00	127,054.00	126,056.00	133,124.00	118,119.00	107,540.00	117,129.00	141,712.00	133,732.00	149,938.00	115,777.00	**1,543,157.20**	
Demand (kW)	219.70	212.70	213.10	242.50	229.40	232.40	228.60	254.60	239.60	225.70	234.60	212.90	**254.60**	
Natural Gas (MCF)	2,152.00	1,035.00	573.00	63.00	53.00	14.00	10.00	4.00	10.00	120.00	169.00	1,433.00	**5,636.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Controls														
Electric (kWh)	106,439.80	133,063.80	110,549.10	103,876.40	112,198.60	110,751.40	98,278.50	113,517.20	115,420.40	110,976.20	142,428.80	93,965.90	**1,351,465.90**	**191,691 kWh**
Demand (kW)	230.90	251.30	224.00	257.30	251.90	309.60	325.40	339.00	256.60	234.40	280.10	221.90	**339.00**	
Natural Gas (MCF)	1,785.50	841.60	457.40	54.50	43.80	6.40	6.50	2.40	4.00	92.40	138.60	1,179.10	**4,612.20**	**1,024 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
	1,785.50	841.60	457.40	54.50	43.80	6.40	6.50	2.40	4.00	92.40	138.60	1,179.10		
New Windows														
Electric (kWh)	106,439.80	133,063.80	110,549.10	103,876.40	112,198.60	110,751.40	98,278.50	113,517.20	115,420.40	110,976.20	142,428.80	93,965.90	**1,351,465.90**	**0.00 kWh**
Demand (kW)	230.90	251.30	224.00	257.30	251.90	309.60	325.40	339.00	256.60	234.40	280.10	221.90	**339.00**	
Natural Gas (MCF)	1,752.90	820.40	440.10	54.50	43.80	6.40	6.50	2.40	4.00	92.40	122.10	1,140.00	**4,485.50**	**127 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

CCG Energy Solutions — *Revere Middle School*

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Savings
Existing														
Electric (kWh)	72,640.00	79,440.00	70,320.00	61,680.00	61,840.00	45,520.00	34,320.00	50,800.00	63,360.00	70,640.00	78,000.00	71,680.00	**760,240.20**	
Demand (kW)	180.00	182.00	184.00	186.00	184.00	120.00	94.00	183.00	200.00	192.00	181.00	192.00	**200.00**	
Natural Gas (MCF)	1,180.00	1,052.00	772.00	533.00	259.00	40.00	29.00	26.00	48.00	422.00	575.00	840.00	**5,776.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Control														
Electric (kWh)	63,645.70	69,836.40	61,910.40	53,018.80	56,838.10	37,669.20	28,069.00	45,776.80	58,648.40	62,924.00	68,579.30	62,469.50	**669,385.60**	**90,855 kWh**
Demand (kW)	180.00	182.00	184.00	186.00	184.00	98.70	74.70	161.60	200.20	195.10	181.00	192.10	**200.20**	
Natural Gas (MCF)	785.10	685.70	513.80	332.20	259.00	40.00	29.00	26.00	48.00	329.80	384.70	539.50	**3,972.90**	**1,803.1 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

CCG Energy Solutions — *Hillcrest Elementary School*

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Savings
Existing														
Electric (kWh)	51,200.00	66,240.00	54,880.00	50,400.00	42,560.00	40,480.00	35,680.00	37,600.00	50,400.00	48,480.00	55,520.00	49,920.00	**583,360.10**	
Demand (kW)	138.00	149.00	147.00	140.00	140.00	133.00	133.00	130.00	137.00	134.00	134.00	138.00	**149.00**	
Natural Gas (MCF)	1,415.00	1,011.00	862.00	282.00	130.00	0.00	3.00	2.00	178.00	289.00	417.00	692.00	**5,281.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
Lighting														
Electric (kWh)	40,295.40	51,803.30	42,722.00	39,897.80	33,310.90	39,311.50	34,854.60	36,900.60	39,150.20	38,250.00	43,249.60	39,509.80	**479,255.60**	**104,105 kWh**
Demand (kW)	104.80	113.10	111.60	110.10	108.20	130.00	131.60	128.70	106.90	103.30	101.70	104.80	**131.60**	
New Control														
Electric (kWh)	34,076.80	44,058.50	34,777.10	28,404.90	21,740.70	10,953.00	10,014.10	10,209.90	27,206.30	29,373.20	34,844.90	33,203.10	**318,862.50**	**160,393 kWh**
Demand (kW)	104.80	113.10	111.60	110.40	108.60	54.40	55.50	53.20	107.30	105.40	101.70	104.80	**113.10**	
Natural Gas (MCF)	1,328.50	914.90	698.50	249.80	31.60	0.00	3.00	2.00	190.30	282.80	315.80	652.50	**4,669.70**	**611 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Plant														
Electric (kWh)	31,246.60	41,180.80	33,192.50	27,468.30	21,620.90	10,953.50	10,014.20	10,209.90	27,156.90	27,777.30	33,252.70	30,397.30	**304,470.90**	**14,392 kWh**
Demand (kW)	134.40	139.50	140.00	133.70	129.50	104.80	105.40	101.60	126.30	124.30	124.90	133.90	**140.00**	
Natural Gas (MCF)	1,047.20	713.20	535.00	152.40	17.70	0.00	3.00	2.00	125.70	149.40	245.50	511.40	**3,502.50**	**1,167 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	**303**
Windows 5														
Electric (kWh)	31,246.40	41,180.80	33,192.50	27,468.30	21,619.90	10,952.50	10,013.20	10,207.90	27,155.90	27,777.30	33,252.70	30,397.30	**304,464.70**	**6 kWh**
Demand (kW)	134.40	139.50	140.00	133.70	129.50	104.80	105.40	101.60	126.30	124.30	124.90	133.90	**140.00**	
Natural Gas (MCF)	1,044.20	713.20	535.00	152.40	17.70	0.00	3.00	2.00	125.70	149.40	243.50	510.40	**3,496.50**	**6 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

CCG Energy Solutions — *Bath Elementary*

Energy Use Comparison

Scenario	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Savings
Existing														
Electric (kWh)	36,000.00	34,880.00	30,720.00	22,720.00	27,680.00	18,060.00	18,720.00	12,480.00	27,680.00	29,920.00	29,280.00	25,600.00	**313,740.00**	
Demand (kW)	82.00	85.00	80.00	77.00	75.00	42.00	40.00	75.00	78.00	75.00	77.00	77.00	**85.00**	

Natural Gas (MCF)	768.00	865.00	326.00	239.00	107.00	0.00	11.00	12.00	17.00	304.00	370.00	847.00	**3,866.00**	
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Controls														
Electric (kWh)	31,611.00	30,204.80	26,228.80	18,411.60	21,653.10	11,682.00	12,329.80	8,301.30	21,614.50	29,047.70	24,668.20	22,182.40	**257,935.20**	**55,805 kWh**
Demand (kW)	83.50	86.60	81.50	78.50	75.20	42.10	40.10	75.20	78.10	75.70	78.50	78.40	**86.60**	
Natural Gas (MCF)	596.40	652.60	232.80	150.60	59.80	0.00	11.00	12.00	17.00	396.20	247.90	654.30	**3,030.60**	**835.4 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	
New Plant														
Electric (kWh)	30,810.70	29,186.00	25,313.50	18,042.80	21,653.10	11,682.00	12,329.80	8,301.30	21,614.50	28,491.00	23,987.00	21,828.30	**253,240.00**	**4,695 kWh**
Demand (kW)	84.00	86.90	81.00	76.40	75.20	42.10	40.10	75.20	78.10	75.40	77.50	78.90	**86.90**	
Natural Gas (MCF)	546.20	574.10	237.90	127.00	59.80	0.00	11.00	12.00	17.00	321.30	215.10	576.00	**2,697.40**	**333.2 MCF**
Demand (kBtuh)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**	

Lighting Form

Lighting Inventory Form

Applicant Name: Revere Schools
Facility Name: Revere MS
Date: 9/10/2013

Instructions: Please use one line for each fixture type in a room or area
For existing or proposed control, choose OCC for Occupany 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.

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION					
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DAYLTG, OCC or NONE.	Proposed Sensor Quantity When applicable
e.g.	400 North Street	2	Office	Interior	Office - Small	Cooled Space	3	F44ILL	112	0.34	NONE		3	CFT55/1-BX	56	0.17	OCC	3
e.g.	Example	1	Restaurant	Exterior	Restaurant - Fast Food	Uncooled space	5	Example Cut Sheet 1	50	0.25	OCC	5	5	Example Cut Sheet 2	25	0.13	DAYLTG	5
1	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	18	CFQ26/1-L	27	0.49	NONE						NONE	
2	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	52	F41ILL	31	1.61	NONE		52	F41SSILL	26	1.35	NONE	
3	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	5	F42lll	59	0.30	NONE						NONE	
4	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	10	F31ee	38	0.38	NONE		10	F31ILL	26	0.26	NONE	
5	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	4	CFQ26/2-L	50	0.20	NONE		2	F42SSILL	48	0.10	NONE	
6	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	679	F42ill	59	40.06	NONE		673	F42SSILL	48	32.30	NONE	
7	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	11	MH50/1	72	0.79	NONE		11	Cut Sheet 6	13	0.14	NONE	
8	3195 Spring Valley Road		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	1	I100/1	100	0.10	NONE		1	Cut Sheet 9	50	0.05	NONE	
9	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	26	I100/1	100	2.60	NONE		26	CF23/1-L	25	0.65	NONE	
10	3195 Spring Valley Road		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	10	MH150/1	190	1.90	NONE		10	Cut Sheet 9	50	0.50	NONE	
11	3195 Spring Valley Road		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	5	MH200/1	232	1.16	NONE		5	Cut Sheet 8	75	0.38	NONE	
12	3195 Spring Valley Road		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	4	MH250/1	295	1.18	NONE		4	Cut Sheet 10	90	0.36	NONE	
13	3195 Spring Valley Road		School	Exterior	Dusk-to-Dawn Lighting	Uncooled space	10	HPS250/1	295	2.95	NONE		10	Cut Sheet 11	101	1.01	NONE	
14	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	40	MH400/1	458	18.32	NONE		40	F48ill	224	8.96	DAYLTG	
15	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space					NONE		9	F42SSill	48	0.43	NONE	
16	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	412	F42ill	59	24.31	NONE		412	F42ssill	48	19.78	OCC	
17	3195 Spring Valley Road		School	Interior	Education - Secondary School	Cooled Space	21	F42ill	59	1.24	NONE		21	F42ssill	48	1.01	DAYLTG	
18											NONE						NONE	
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137											NONE						NONE	
138											NONE						NONE	

Line Item	Energy Calculations														
Line Item	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
e.g.			0.17	84%	84%	34%	12%		30%			0.19	2,808	3,435	
e.g.		0.13		88%	88%			30%	50%		0.11		8,760	4,156	
1					57%	34%	12%							2,080	
2	0.26				57%	34%	12%			0.20				2,080	606
3					57%	34%	12%							2,080	
4	0.12				57%	34%	12%			0.09				2,080	280
5	0.10				57%	34%	12%			0.08				2,080	242
6	7.76				57%	34%	12%			5.92				2,080	18,071
7	0.65				57%	34%	12%			0.50				2,080	1,512
8		0.05												3,833	
9			1.95		57%	34%	12%					1.49		2,080	
10		1.40												3,833	
11		0.79												3,833	
12		0.82												3,833	
13		1.94												3,833	
14	9.36				57%	34%	12%		50%	7.15				2,080	21,805
15					57%	34%	12%							2,080	
16	4.53				57%	34%	12%		30%	3.46				2,080	10,558
17	0.23				57%	34%	12%		50%	0.18				2,080	538

Lighting Form

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION							Energy Calculations															
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control Please enter DATA TO, OCC or NONE.	Proposed Sensor Quantity When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Interior Demand Savings (kW) excluding CFLs or Exit Signs	Exterior Demand Savings (kW) excluding CFLs or Exit Signs	Demand Savings (kW) CFLs or LED Exit Signs	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)
139											NONE						NONE																	
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Totals							1,308			97.58			1,286			67.28			23.01	5.00	1.95							17.58		1.49			53,611		

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	102,732
Total Change in Connected Load	29.96

Annual Estimated Cost Savings	$10,273.20
Annual Operating Hours	2,596

Interior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$2,680.55
Exterior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$957.30
Total retrofit CFL Incentive @ $1/screw-in CFL lamp; $15/hard-wired CFL lamp (includes all retrofit CFLs, both interior and exterior)	$26.00
Total retrofit LED Exit Incentive @ $10/exit sign	$0.00
Total Lighting Controls Incentive @ $25/sensor (includes all Lighting Controls, both interior and exterior)	$0.00

Total Calculated Incentive	$3,663.85

Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1260
Total Lamp Quantity for retrofit Screw-In CFLs	26
Total Lamp Quantity for retrofit Hard-Wired CFLs	0
Total Fixture Quantity for retrofit LED Exit Signs	0
Total Quantity for Occupancy Sensors	0
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)	19.07

Mercantile Customer Project Commitment Agreement
Exemption Option

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between Ohio Edison Company, its successors and assigns (hereinafter called the "Company") and Revere Local Schools, 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 annual 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 and consistent with the Statute, desires to pursue exemption from paying charges included in the Company's then current cost recovery mechanism (hereinafter, "Rider DSE") as approved by the Public Utilities Commission of Ohio ("Commission") for recovery of the DSE2 costs associated with the Company Plan; and is committing the Customer Energy Project(s) as a result of such exemption.

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 an exemption; and

WHEREAS, in consideration of, and upon receipt of, said exemption, Customer has consented to committing the Customer Energy Project(s) to the Company and complying with all other terms and conditions set forth herein, including without limitation, the submission of an annual report on the energy savings and/or peak-demand reductions achieved by the Customer Energy Project(s).

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 applicable, "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 exemption benefits discussed in Article 3 below; and (ii) will not affect any of Customer's other requirements or obligations, including without limitation any reporting requirements, as set forth herein.

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 a 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" 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 exemption from paying the DSE2 charge of the Company's Rider DSE.

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 Exemption and Annual Report**. Upon Commission approval of the request for exemption, the Company will exempt Customer from paying any Rider DSE charges consistent with any Commission directives as set forth in the Commission's Finding and Order approving the Joint Application. Such exempt status shall apply to those accounts identified by Customer that pertain to those Customer sites with one or more Customer Energy Project(s) approved for integration into the Company Plan by the Commission in the Joint Application.

a. For purposes of this Agreement, a "site" shall be a single location with one or more facilities. As examples only, a site includes an industrial plant, a hospital complex or a university located on one or more parcels of land, provided that said parcels are contiguous.

b. For purposes of this Agreement, an "account" shall be as defined by the Company through its normal business practices. Any account identified by Customer shall be eligible for exemption, provided that said account pertains to a specific site with at least one Customer Energy Project that qualifies Customer for exemption from paying Rider DSE charges.

c. Any new accounts created at a site on which there is already an approved Customer Energy Project shall, at the option of the Customer, be included within the exemption granted under said project, and shall be included for purposes of calculating future eligibility for exemption under the project. Any such election shall become effective in the first billing cycle after March 15th following identification of said account in the annual report required under Section 3(d)(iii) below.

d. Customer acknowledges and agrees that if it desires to pursue such exempt status, as evidenced in the Joint Application, Customer is obligated to provide to the Company an annual report on the energy savings and peak-demand reductions achieved by the Customer Energy Project(s) on a calendar year basis. Company shall provide Customer with such information as it may require, that is in Company's possession, for the purposes of preparing such report. Company shall provide a template for Customer to use in preparing the annual report and shall make available a designated Company representative to answer questions.

i. Said report shall be submitted annually on or before January 31 of each year after Commission approval of the Joint Application.

ii. Said report shall provide all information required under the Rules, and where the requirements of the Rules conflict with a requirement under this Agreement or the Joint Application, the requirements of the Rules shall control.

iii. Said report shall, at a minimum, include the following information for each Customer Energy Project that has been approved by the Commission:

1. A demonstration that the energy savings and peak-demand reductions associated with the Customer Energy Project(s) meet the total resource cost test or that the Company's avoided cost exceeds the cost to the Company for the Customer's program;

2. A statement distinguishing programs implemented before and after January 1 of the current year;

3. A quantification of the energy savings or peak-demand reductions for programs initiated prior to 2009 in the baseline period;

4. A recognition that the Company's baselines have been increased by the amount of mercantile customer energy savings and demand reductions;

5. A listing and description of the Customer Energy Projects that have been implemented, which provides the detail required by the Rules;

6. An accounting of expenditures made by the mercantile customer for each program and its component energy savings and peak-demand reduction attributes; and

7. A timeline showing when each Customer Energy Project went into effect and when the energy savings and peak-demand reductions occurred.

8. Any other information reasonably necessary for the Company to (i) verify Customer's continued eligibility for exemption from paying Rider charges; and (ii) report in the Company's annual status report to the Commission the EE&PDR results related to each Customer Energy Project.

e. Customer's exemption shall automatically terminate:

i. At the end of the exemption period as determined by the Commission

ii. Upon order of the Commission or pursuant to any Commission rule;

iii. If Customer fails to comply with the terms and conditions set forth in the Company's then current Rider DSE, or its equivalent, as amended from time to time by the Commission, within a reasonable period of time after receipt of written notice of such non-compliance;

iv. If it is discovered that Customer knowingly falsified any documents provided to the Company or the Commission in connection with this Agreement or the Joint Application. In such an instance, Company reserves the right to recover any exempted rider charges from the date of approval of the Joint Application through the date said exemption is terminated; or

v. If Customer fails to submit the annual report required in (d) above. In such an instance, Company reserves the right to recover any exempted rider charges from the date of approval of the Joint Application through the date said exemption is terminated. It is expressly agreed that this provision shall not apply should said report contain errors, provided that the submission of said report is made in good faith. It is further agreed that the Company will provide written notice of the date on which said report is due at least thirty (30) days prior thereto.

f. Company reserves the right to recover from Customer any Rider DSE charges incurred by Customer after the date Customer's exemption terminates.

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

a. If the Commission fails to approve this Agreement through the Joint Application;

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 exemption, 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.

Customer acknowledges that if a Customer Project is withdrawn pursuant to Paragraph 1(b) of this Agreement, the exemption or a portion of such exemption may be affected. Should Customer elect to withdraw a project pursuant to Paragraph 1(b), Customer shall provide Company with reasonable assistance in preparing any documentation that may be required by the Commission and, upon reasonable request, shall provide documentation supporting the necessity to withdraw such project.

4. **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.

5. **Taxes.** Customer shall be responsible for all tax consequences (if any) arising from the application of the exemption.

6. **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:

Revere Local Schools
3496 Everett Road
Richfield, Ohio 44333
Attn:David Forrest
Telephone:330-666-4155
Fax:
Email:DForrest@RevereSchools.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.

7. **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.

8. **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.

9. **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.

10. **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.

11. **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.

12. **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.

13. **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.

Ohio Edison Company
(Company)

By: John C. Cupp

Title: VP of Energy Efficiency

Date: 3-4-14

Revere Local Schools
(Customer)

By: [signature]

Title: CFO/TREASURER

Date: 2/27/14

Affidavit of Revere Local Schools – Exhibit A

STATE OF OHIO)
) SS:
COUNTY OF Summit)

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

1. I am the CFO/Treasurer of Revere Local 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 Ohio Edison 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 a Rider Exemption ("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.

CFO/TREASURER
REVERE L.S.D.

Sworn to before me and subscribed in my presence this 27 day of Feb, 2014

Notary

C. SANDRA WIERZBICKI, Notary Public
Residence - Summit County
State Wide Jurisdiction, Ohio
My Commission Expires August 31, 2014

Summary: Application to Commit Energy Efficiency/Peak Demand Reduction Programs of Ohio Edison Company and Revere Local Schools electronically filed by Ms. Jennifer M. Sybyl on behalf of Ohio Edison Company and Revere Local Schools