Ohio | Public Utilities Commission

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

Case No.: 13-0701-EL-EEC

Mercantile Customer: University of Toledo

Electric Utility: The Toledo Edison Company

Program Title or Description: Maintenance VFD, Motor and Lighting Upgrades

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:University of Toledo

Principal address:2801 W. Bancroft Toledo, OH 43606

Address of facility for which this energy efficiency program applies:See Exhibit 1

Name and telephone number for responses to questions:Dan Dumond 614-949-5203

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

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

Section 2: Application Information

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

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

B) The electric utility is: The Toledo 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):

See Exhibit 1.

☐ 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: 276,696 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: 98,718 kWh

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

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

Section 4: Demand Reduction/Demand Response Programs

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

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

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

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

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

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

B) On what date did the customer initiate its demand reduction program?

____

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

_____ kW

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

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

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

A) The customer is applying for:

☒ Option 1: A cash rebate reasonable arrangement.

OR

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

OR

☐ Commitment payment

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

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

☒ A cash rebate of $17,619. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

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

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

OR

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

OR

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

Section 6: Cost Effectiveness

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

☐ Total Resource Cost (TRC) Test. The calculated TRC value is: _____(Continue to Subsection 1, then skip Subsection 2)

☒ Utility Cost Test (UCT) . The calculated UCT value is: **See Exhibit 3** (Skip to Subsection 2.)

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

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

The electric utility's avoided supply costs were _____.

Our program costs were _____.

The incremental measure costs were .

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

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

Our avoided supply costs were **See Exhibit 3**

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

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

Section 7: Additional Information

Please attach the following supporting documentation to this application:

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

Ohio | Public Utilities Commission

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

Case No.: 13-0701-EL-EEC

State of Ohio :

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

1. I am the duly authorized representative of:

   The University of Toledo
   [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.

Michael Green, Michael Green
Signature of Affiant & Title

Sworn and subscribed before me this 17th day of April, 2013
Month/Year

Signature of official administering oath

Diana S. Raider, Dir, Risk Ops
Print Name and Title

My commission expires on 12/16/13

NOTARIAL SEAL

DIANA SUE RAIDER
Notary Public, State of Ohio
Wood County
My Commission Expires Dec. 16, 2013

Exhibit 1

Customer Legal Entity Name: University of Toledo

Site Address: University of Toledo Maintenance Department
Principal Address: 2801 W. Bancroft St.

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	This project includes the replacement of existing lighting fixtures with more efficient (RW T8 and LED) fixtures.	Using the lighting invoices seen in Attachment A, data was gathered and entered into the FE Lighting Project Cash Rebate Form to determine the savings shown in this project tab. Attachment B is an organized summary of the type, quantity, and pricing data from the lighting invoices. Attachment C includes the manufacturer cut sheets and specifications of the installed lights.	Within the next year. This has been determined becasue these systems have an average lifespan of 40,000 hours. They have been in place for ten years.	N/A
2	Motor Upgrades	This project includes replacment of several motors with new motors that are more efficient.	Using the motor invoices seen in Attachment D, data was gathered and entered into the FE Motor and Drives Cash Rebate Form to determine the rebate. Attachment F is an organized summary of the type, quantity, and pricing data from the motor invoices. Attachment E includes the manufacturer cut sheets and specifications of the installed motors. Savings were calculated in Attachment G.	No specific time frame. Motor were replaced for energy efficiency improvements, and wer efully functional and had no known obsolescence date at time of replacement.	N/A
3	VFD Installation	This project includes the installation of new VFDs on esxisting motors to control them.	Data was gathered from attachment H, proof of purchase for the VFDs and attachment I, a spec sheet for the VFDs. It was entered into the Motors and drives form to calculate rebate, and entered into attachment J to calculate the savings.	N/A	The alternative was to not install controls and allow the motors to run at full speed.

Docket No. 13-0701
Site: 2801 W. Bancroft St.

Exhibit 2

Customer Legal Entity Name: University of Toledo
Site Address: University of Toledo Maintenance Department
Principal Address: 2801 W. Bancroft St.

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) *Note 1*
2010	75,334,512	75,334,512	75,334,512
2009	84,645,244	84,645,244	84,645,244
Average	**79,989,878**	**79,989,878**	**79,989,878**

Project Number	Project Name	In-Service Date	Project Cost $	50% of Project Cost $	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) $	Eligible Rebate Amount (H) $ *Note 2*	Commitment Payment $
1	Lighting Retrofit	02/14/2013	$24,621	$12,311	263,571	263,571	-	$13,179	$9,884	
2	Motor Upgrades	06/12/2012	$21,968	$10,984	13,125	13,125	-	$998	$749	
3	VFD Installation	02/26/2013	$30,810	$15,405	98,718	98,718	-	$9,315	$6,986	
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
		Total	**$77,399**		**375,414**	**375,414**	**0**	**$23,492**	**$17,619**	**$0**

Docket No. 13-0701
Site: 2801 W. Bancroft St.

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

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

Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost $/MWh (B)	Utility Avoided Cost $ (C)	Utility Cost $ (D)	Cash Rebate $ (E)	Administrator Variable Fee $ (F)	Total Utility Cost $ (G)	UCT (H)
1	264	$ 308	$ 81,254	$ 1,350	$9,884	$2,636	$ 13,870	**5.9**
2	13	$ 308	$ 4,046	$ 1,350	$749	$131	$ 2,230	**1.81**
3	99	$ 308	$ 30,433	$ 1,350	$6,986	$987	$ 9,323	**3.26**
Total	**375**	**$ 308**	**115,733**	**4,050**	**$17,619**	**$3,754**	**25,423**	**4.6**

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)

University of Toledo ~ University of Toledo Maintenance Department
Docket No. 13-0701

Site: 2801 W. Bancroft St.

Lighting Inventory Form

Applicant Name: University of Toledo

Facility Name: Maintenance Dept

Date:

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%*				*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	2801 W. Bancroft St.	1	University	Interior	Education - University	Cooled Space	1,000	F42SS	94	94.00	NONE		1,000	F42SSILL	48	48.00	NONE		46.00			100%	64%	34%	12%			39.45			5,010	5,010	258,115
2	2801 W. Bancroft St.	1	University	Exterior	Education - University	Uncooled space	3	MH50/1	72	0.22	NONE		3	Cut Sheet 3	26	0.08	NONE			0.14		100%	64%						0.09		5,010	5,010	
3	2801 W. Bancroft St.	1	University	Exterior	Education - University	Uncooled space	6	MH70/1	95	0.57	NONE		6	Cut Sheet 5	48	0.29	NONE			0.28		100%	64%						0.18		5,010	5,010	
4	2801 W. Bancroft St.	1	University	Exterior	Education - University	Uncooled space	3	hps100/1	138	0.41	NONE		3	Cut Sheet 7	71	0.21	NONE			0.20		100%	64%						0.13		5,010	5,010	
5	2801 W. Bancroft St.	1	University	Exterior	Education - University	Uncooled space	6	hps150/1	188	1.13	NONE		6	Cut Sheet 10	110	0.66	NONE			0.47		100%	64%						0.30		5,010	5,010	
6											NONE						NONE																
7											NONE						NONE																
8											NONE						NONE																
9											NONE						NONE																
10											NONE						NONE																
11											NONE						NONE																
12											NONE						NONE																
13											NONE						NONE																
14											NONE						NONE																
15											NONE						NONE																
16											NONE						NONE																
17											NONE						NONE																
18											NONE						NONE																
19											NONE						NONE																
20											NONE						NONE																
21											NONE						NONE																
22											NONE						NONE																
23											NONE						NONE																
24											NONE						NONE																
25											NONE						NONE																
26											NONE						NONE																
27											NONE						NONE																
28											NONE						NONE																
29											NONE						NONE																
30											NONE						NONE																
31											NONE						NONE																
32											NONE						NONE																
33											NONE						NONE																
34											NONE						NONE																
35											NONE						NONE																
36											NONE						NONE																
37											NONE						NONE																
38											NONE						NONE																
39											NONE						NONE																
40											NONE						NONE																
41											NONE						NONE																
42											NONE						NONE																
43											NONE						NONE																
44											NONE						NONE																
45											NONE						NONE																
46											NONE						NONE																
47											NONE						NONE																
48											NONE						NONE																
49											NONE						NONE																
50											NONE						NONE																
51											NONE						NONE																
52											NONE						NONE																
53											NONE						NONE																
54											NONE						NONE																
55											NONE						NONE																
56											NONE						NONE																
57											NONE						NONE																
58											NONE						NONE																
59											NONE						NONE																
60											NONE						NONE																
61											NONE						NONE																
62											NONE						NONE																
63											NONE						NONE																
64											NONE						NONE																
65											NONE						NONE																
66											NONE						NONE																
67											NONE						NONE																
68											NONE						NONE																
69											NONE						NONE																
70											NONE						NONE																
71											NONE						NONE																
72											NONE						NONE																
73											NONE						NONE																
74											NONE						NONE																
75											NONE						NONE																
76											NONE						NONE																
77											NONE						NONE																
78											NONE						NONE																
79											NONE						NONE																
80											NONE						NONE																
81											NONE						NONE																
82											NONE						NONE																
83											NONE						NONE																
84											NONE						NONE																
85											NONE						NONE																
86											NONE						NONE																
87											NONE						NONE																
88											NONE						NONE																
89											NONE						NONE																
90											NONE						NONE																
91											NONE						NONE																
92											NONE						NONE																
93											NONE						NONE																
94											NONE						NONE																
95											NONE						NONE																
96											NONE						NONE																
97											NONE						NONE																
98											NONE						NONE																
99											NONE						NONE																
100											NONE						NONE																
101											NONE						NONE																
102											NONE						NONE																
103											NONE						NONE																
104											NONE						NONE																
105											NONE						NONE																
106											NONE						NONE																
107											NONE						NONE																
108											NONE						NONE																
109											NONE						NONE																
110											NONE						NONE																
111											NONE						NONE																
112											NONE						NONE																
113											NONE						NONE																
114											NONE						NONE																
115											NONE						NONE																
116											NONE						NONE																
117											NONE						NONE																
118											NONE						NONE																
119											NONE						NONE																
120											NONE						NONE																
121											NONE						NONE																
122											NONE						NONE																
123											NONE						NONE																
124											NONE						NONE																
125											NONE						NONE																
126											NONE						NONE																
127											NONE						NONE																
128											NONE						NONE																
129											NONE						NONE																
130											NONE						NONE																
131											NONE						NONE																
132											NONE						NONE																
133											NONE						NONE																
134											NONE						NONE																
135											NONE						NONE																
136											NONE						NONE																
137											NONE						NONE																
138											NONE						NONE																

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 TG, 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																	
140											NONE						NONE																	
141											NONE						NONE																	
142											NONE						NONE																	
143											NONE						NONE																	
144											NONE						NONE																	
145											NONE						NONE																	
146											NONE						NONE																	
147											NONE						NONE																	
148											NONE						NONE																	
149											NONE						NONE																	
150											NONE						NONE																	
151											NONE						NONE																	
152											NONE						NONE																	
153											NONE						NONE																	
154											NONE						NONE																	
155											NONE						NONE																	
156											NONE						NONE																	
157											NONE						NONE																	
158											NONE						NONE																	
159											NONE						NONE																	
160											NONE						NONE																	
161											NONE						NONE																	
162											NONE						NONE																	
163											NONE						NONE																	
164											NONE						NONE																	
165											NONE						NONE																	
166											NONE						NONE																	
167											NONE						NONE																	
168											NONE						NONE																	
169											NONE						NONE																	
170											NONE						NONE																	
171											NONE						NONE																	
172											NONE						NONE																	
173											NONE						NONE																	
174											NONE						NONE																	
175											NONE						NONE																	
176											NONE						NONE																	
177											NONE						NONE																	
178											NONE						NONE																	
179											NONE						NONE																	
180											NONE						NONE																	
181											NONE						NONE																	
182											NONE						NONE																	
183											NONE						NONE																	
184											NONE						NONE																	
185											NONE						NONE																	
186											NONE						NONE																	
187											NONE						NONE																	
188											NONE						NONE																	
189											NONE						NONE																	
190											NONE						NONE																	
191											NONE						NONE																	
192											NONE						NONE																	
193											NONE						NONE																	
194											NONE						NONE																	
195											NONE						NONE																	
196											NONE						NONE																	
197											NONE						NONE																	
198											NONE						NONE																	
199											NONE						NONE																	
200											NONE						NONE																	
201											NONE						NONE																	
202											NONE						NONE																	
203											NONE						NONE																	
204											NONE						NONE																	
205											NONE						NONE																	
206											NONE						NONE																	
207											NONE						NONE																	
208											NONE						NONE																	
209											NONE						NONE																	
210											NONE						NONE																	
211											NONE						NONE																	
212											NONE						NONE																	
213											NONE						NONE																	
214											NONE						NONE																	
215											NONE						NONE																	
216											NONE						NONE																	
217											NONE						NONE																	
218											NONE						NONE																	
219											NONE						NONE																	
220											NONE						NONE																	
221											NONE						NONE																	
222											NONE						NONE																	
223											NONE						NONE																	
224											NONE						NONE																	
225											NONE						NONE																	
226											NONE						NONE																	
227											NONE						NONE																	
228											NONE						NONE																	
229											NONE						NONE																	
230											NONE						NONE																	
231											NONE						NONE																	
232											NONE						NONE																	
233											NONE						NONE																	
234											NONE						NONE																	
235											NONE						NONE																	
236											NONE						NONE																	
237											NONE						NONE																	
238											NONE						NONE																	
239											NONE						NONE																	
240											NONE						NONE																	
241											NONE						NONE																	
242											NONE						NONE																	
243											NONE						NONE																	
244											NONE						NONE																	
245											NONE						NONE																	
246											NONE						NONE																	
247											NONE						NONE																	
248											NONE						NONE																	
249											NONE						NONE																	
250											NONE						NONE																	
Totals							1,018			96.33			1,018			49.24			46.00	1.09								39.45	0.70				258,115

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	263,571
Total Change in Connected Load	47.09

Annual Estimated Cost Savings	$26,357.10
Annual Operating Hours	5,010

Interior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$12,905.75
Exterior Lighting Incentive @ $0.05/kWh (excluding retrofit CFLs, sensors, or LED exit signs)	$272.80
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	$13,178.55

Total Fixture Quantity excluding retrofit CFLs and LED Exit Sign	1018
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)	40.15

FirstEnergy

Ohio Edison • The Illuminating Company • Toledo Edison

Motors and Drives Incentives for Business Program

The Motors and Drives Incentives for Business Program from Ohio Edison, The Illuminating Company, and Toledo Edison (FirstEnergy's utilities) offers incentives and information to encourage participants to install NEMA Premium® motors and Variable Frequency Drives. The program is funded by FirstEnergy nonresidential utility customers in Ohio in accordance with Senate Bill 221.

Effective Dates

To qualify for incentive levels on this application form, equipment must have been purchased on or after April 11, 2011 and after receipt of a formal pre-approval letter from the program.

Eligible Participants

The Motors and Drives Incentives Program is available to existing facilities of commercial and industrial retail service customers of FirstEnergy's utilities in Ohio. Residential customers may take advantage of separate programs.

Eligible Measures

To qualify for an incentive, the motor(s) must operate a minimum of 2,000 hours annually. Only AC induction motors are eligible for incentives.

To be eligible for the motor incentives:

1. Projects must be a "one-for-one" replacement of a motor with a new, NEMA Premium® motor. The sizes (hp) of the existing and new motors may vary, but the project must involve replacing a quantity of motors for the same quantity of new motors. For new construction, the "existing" motor should be a code-compliant option that is less efficient than the NEMA Premium® motor that is being installed.
2. Project does not involve a change in annual run hours.
3. Project includes the installation of a new NEMA Premium® motor of up to 200hp.

Variable Frequency Drives (VFDs) incentives are available only for the installation of a new VFD on applications where no existing speed control exists on applications controlling a *maximum* of 500 hp. This form can be used for most Motors & VFD projects by following the additional requirements relative to measurement of the "load factor" and "annual operating hours". See pages 3 and 4 for details. For other projects involving motors and drives, please apply to the Custom Incentives for Business program.

Existing Facilities vs. New Construction

Existing facilities and new construction projects, as defined above, are eligible for these incentives. Existing facilities should consider the currently installed equipment when calculating the baseline energy usage. New construction projects should follow applicable building energy construction code when calculating baseline energy use.

Pre-Approval Requirements

Effective January 1, 2012 all applications received by the program will require pre-approval before the purchase and installation of equipment.

Limitations

All incentives available from FirstEnergy's Motors and Drives program are limited to the total project cost (including labor).

Questions?

If you have questions, please review the FAQ section of the program website at www.energysaveOhio.com. This information is being updated regularly.

Specific questions can also be sent to program representatives via email at energysaveOhio@saic.com.

Confirmation of Materials Received

If you do not get a confirmation that we have received your materials within five business days, please contact us at energysaveOhio@saic.com.

How Do I Apply for Incentives?

Please review the Business Program Terms and Conditions and application requirements.

Step 1: Review program materials to confirm the energy efficiency measures meet program requirements. Visit www.energysaveOhio.com or contact us at energysaveOhio@saic.com or 1-866-578-5220 with questions.

Step 2: Complete the program applicationand attach a copy of supporting technical documentation required to verify that installed equipment meets program efficiency levels, such as manufacturers' cut sheets.

Sign the application form and submit a complete application package to the program for consideration, review and approval. Incomplete applications will not be considered and will be returned to the applicant for completion.

.

A complete application package includes:

- A signed application form, with all information requested on pages three and four.
- A copy of IRS form W-9 for the incentive payee.
- Manufacturers' specification (cut) sheets for each installed motor and drive type to verify that the equipment meets the program efficiency requirements.

Complete application packages must be returned via email, fax or hardcopy:

Mail: **FirstEnergy Motors and Drives Incentives**
for Business Program
8870 Darrow Road
Suite F106-243
Twinsburg, OH 44087
Fax: 440-201-6936
Email: energysaveOhio@saic.com

Step 3: The program will notify the applicant via email when the review is complete and funds have been reserved. Participants may purchase and install their energy efficient equipment upon notification of pre-approval.

Step 4: Once the project is complete, you should review your approved application for any changes to the project that occurred during installation and make the needed corrections. Resubmit the application, along with a dated proof of purchase, to the program for incentive payment.

Applications and supporting technical documentation will be reviewed by program staff, and an onsite inspection to verify the installation may be conducted. Upon receipt and verification of all required documentation, the incentive check will be processed and mailed to the applicant or to an authorized representstive, if requested on the application.

To confirm tax status, all applicants (including tax exempt entities) must submit a W-9 with Tax Identification associated with the incentive recipient to enable processing. Incentives will not be paid until W-9s have been received.

CUSTOMER AND PROJECT INFORMATION

Customer Information

Company Name (must match name on utility bill): University of Toledo		Utility Company: ☐ Ohio Edison ☐ The Illuminating Company ■ Toledo Edison	
Tax ID (SSN/FEIN): 34-6401483		Account Number (Required)	
Mailing Address (check mailed to): 2801 W Bancroft St	City: Toledo	State: OH	Zip: 43606
Contact Name: Brooke Mason	Title: Sustainability Specialist		
Email Address: brooke.mason@utoledo.edu	Telephone: 419-530-1042	Fax:	
Physical Installation Address (if different from above):	City:	State:	Zip:

How did you hear about the program? ☐ Program Contact ☐ Utility Contact ■ Program Ally ☐ Direct Mail ☐ Mass Media ☐ Seminar

FE Account Manger: _____ Program Administrator: _____

Other: _____

Contractor / Program Ally Information – If applicable

Company Name: Plug Smart	Contact Name: Lucas Dixon	Title: Operations Manager	
Mailing Address: 1275 Kinnear Road Suite 229	City: Columbus	State: OH	Zip: 43212
Email Address: lucas.dixon@plugsmart.com	Telephone: (614) 580-3352	Fax: 800-518-5576	

Authorization for Incentive Payment to Third Party

Please note that incentive payment will be made to the customer listed above unless a Third Party payment is authorized.
If check is to be paid to a Third Party, please complete the information in the box below.
If less than 100 percent of incentive amount is to be assigned to the Third Party, please complete a Dual Incentive Form located at www.energysaveOhio.com

Payable To:	Representative Contact:		
Mailing Address:	City:	State:	Zip:
Phone:	Email Address:	Tax ID (SSN/FEIN):	

Customer Contact Signature: _____

Print Name: _____ Date: _____

Facility / Project Information

Facility Type (check one):
- ☐ Education – Primary School
- ☐ Education – Secondary School
- ☐ Education – Community College
- ☑ Education – University
- ☐ Grocery
- ☐ Medical – Hospital
- ☐ Medical – Clinic
- ☐ Lodging Hotel (Guest Rooms)
- ☐ Lodging Motel
- ☐ Manufacturing – Light Industrial
- ☐ Multifamily – Common Areas
- ☐ Office – Large
- ☐ Office – Small
- ☐ Restaurant – Sit-Down
- ☐ Restaurant – Fast-Food
- ☐ Retail – 3-Story Large
- ☐ Retail – Single-Story Large
- ☐ Retail – Small
- ☐ Storage – Conditioned
- ☐ Storage – Unconditioned
- ☐ Warehouse
- ☐ Other: _____

Please choose the best description of the predominant space type included for this project (check one):
- ☑ Air Conditioned Space
- ☐ No Air Conditioning
- ☐ Freezer Space
- ☐ Refrigerated Space

- ☐ New Construction
- ☑ Existing Facility

Is natural gas available at your facility?
☑ Yes ☐ No

Customer Class (Check all that apply):
- ☐ Not-for-Profit
- ☐ Multifamily
- ☐ Commercial
- ☐ Industrial
- ☐ Government (State, County or Municipal)
- ☐ Institutional
- ☐ Low Income
- ☐ Federal Government

Note: Residential customers may take advantage of a different program.

Facility Size (approx. sq. ft.):

Start Date (MM/DD/YYYY): _____ Completion (MM/DD/YYYY): _____

Estimated Equipment Cost: _____ Estimated Total Project Cost: _____

Brief Description of Existing Equipment
(i.e. – "Replace 50 HP, 93% ACME motor with 50 HP, 94.5% ACME motor.")

Motor Form

Project Name:	U Toledo Maintenance
Site Name:	University of Toledo
Completed by (name):	
Date(s) completed:	

Motor ID, Location, and Operation Data				Existing Motor Nameplate Data								Proposed Motor Nameplate Data								
Unique Motor I.D.(a)	Number of Identical Units	Motor Location	Annual Hours of Op[2]	Loading (Constant, or if variable, indicate control type)	Load Factor (LF)[3]	Enclosure Type: TEFC or ODP	Mfgr	Model Number	Motor HP	Nominal Efficiency	Speed (RPM)	Loading (Constant, or if variable, indicate control type)	Load Factor (LF)[3]	Enclosure Type: TEFC or ODP	Mfgr	Model Number	Motor HP	Nominal Efficiency	Speed (RPM)	Total Motor Incentive[1] $
CWP 1&2	*2*	*Mech Rm 1*	*3,800*	*Constant*	*0.75*	*ODP*	*Acme*	*12345*	*50*	*93.0%*	*1,800*	*Constant*	*0.75*	*ODP*	*Acme*	*12345*	*50*	*94.5%*	*1,800*	
HU SF	1		2790									constant	.8	TEFC	Baldor	:M4104	10	93.6	1800	$70.00
HU EF	1		2790									constant	.8	TEFC	Baldor	:M3615	5	89.5	1800	$54.00
\HU SF:	1		2790									constant	.8	TEFC	Baldor	:TM377	7.5	91.7	1800	$70.00
EF3	1		2790									constant	.8	TEFC	Baldor	:M3558	2	86.5	1800	$54.00
																			Total Incentive	$248.00

Motor ID's may be specified by HVAC application type and number. Application types eligible for this incentive include
- Chilled Water Pump (CHWP),
- Heating Hot Water Pump (HHWP),
- HVAC Fans (HVACF),
- Cooling Tower Fan (CTF), and
- Condensing Water Pump (CWP).

If the HVAC application is not listed above, please describe the application on a separate sheet and include with your application package.

(1) Motor incentives are listed in Table 2 – Incentive Levels per Motor – on page 5 of this form.

(2) For VAV fan motors, enter 2790 Annual Hours of Operation. For HVAC pump motors, enter 5520 Annual Hours of Operation. For all other motor usage, please estimate your Annual Hours of Operation and attach an explanation of how you determined this value.

(3) For all motor applications, use the Load Factor (LF) default value of 0.75, unless data is available to support the use of a motor-specific LF other than 0.75. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Motor Form

Project Name:	U Toledo Maintenance
Site Name:	University of Toledo
Completed by (name):	
Date(s) completed:	

Motor ID, Location, and Operation Data				Existing Motor Nameplate Data								Proposed Motor Nameplate Data								
Unique Motor ID.[1]	Number of Identical Units	Motor Location	Annual Hours of Op[2]	Loading (Constant, or if variable, inlet vane control type)	Load Factor (LF)[3]	Enclosure Type: TEFC or ODP	Mfgr	Model Number	Motor HP	Nominal Efficiency	Speed (RPM)	Loading (Constant, or if variable, inlet vane control type)	Load Factor (LF)[3]	Enclosure Type: TEFC or ODP	Mfgr	Model Number	Motor HP	Nominal Efficiency	Speed (RPM)	Total Motor Incentive[1] $
CWP 1&2	2	Mech Rm 1	5,800	Constant	0.75	ODP	Acme	12345	50	93.0%	1,800	Constant	0.75	ODP	Acme	12345	50	94.5%	1,800	
HU SF	1		2790									constant	.8	TEFC	Dayton	2MXV1	7.5	91.7	1800	$70.00
HU SF	1		2790									constant	.8	TEFC	k Com	4N200	200	96.2	1800	$400.00
HU EF	1		2790									constant	.8	TEFC	Dayton	2MXW4	25	93.6	1800	$140.00
HU EF	1		2790									constant	.8	TEFC	Dayton	4GYZ8	10	91.7	1800	$70.00
HU EF	1		2790									constant	.8	TEFC	Dayton	4ETR7	10	91.7	1800	$70.00
																			Total Incentive	$750.00

Motor ID's may be specified by HVAC application type and number. Application types eligible for this incentive include
- Chilled Water Pump (CHWP),
- Heating Hot Water Pump (HHWP),
- HVAC Fans (HVACF),
- Cooling Tower Fan (CTF), and
- Condensing Water Pump (CWP).

If the HVAC application is not listed above, please describe the application on a separate sheet and include with your application package.

(1) Motor incentives are listed in Table 2 – Incentive Levels per Motor – on page 5 of this form.

(2) For VAV fan motors, enter 2790 Annual Hours of Operation. For HVAC pump motors, enter 5520 Annual Hours of Operation. For all other motor usage, please estimate your Annual Hours of Operation and attach an explanation of how you determined this value.

(3) For all motor applications, use the Load Factor (LF) default value of 0.75, unless data is available to support the use of a motor-specific LF other than 0.75. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Variable Frequency Drive Form

Please use one row per VFD

VFD and Controlled Motor Nameplate Data												Total Motor Incentive [1] $
Motor Application	Quantity Of VFDs	VFD Manufacturer	VFD Model Number	Unique Motor I.D.(s)	Motor Location	Enclosure Type: TEFC or ODP	Annual Hours of Operation [2]	Load Factor (LF) [3]	Motor Model Number	Motor HP	Motor Nominal Efficiency	
Fan	1	Toshiba	Q94035IERD	AHU SF1	HSC Hospital	TEFC	2790	.75	EM3611T	3	89.5	$90.00
Fan	1	Toshiba	Q94055IERD	AHU SF1	Larimer	TEFC	2790	.75	EM3615T	5	89.5	$150.00
Fan	1	Toshiba	Q94080IERD	AHU EF 1	Scott Park	TEFC	2790	.75	EM3710T	7.5	91.7	$225.00
Fan	1	Toshiba	Q94110IERD	AHU SF2	Student Union	TEFC	2790	.75	EM3714T	10	91.7	$300.00
Fan	1	Toshiba	Q94110IERD	AHU SF3	Student Union	TEFC	2790	.75	EM3714T	10	91.7	$300.00
Fan	1	Toshiba	Q94110IERD	AHU SF 1	Misc	TEFC	2790	.75	EM3714T	10	91.7	$300.00
Fan	1	Toshiba	Q94160IERD	AHU EF	Ottawa East	TEFC	2790	.75	EM2333T	15	92.4	$450.00
Fan	1	Toshiba	Q94160IERD	AHU SF	Ottawa West	TEFC	2790	.75	EM2333T	15	92.4	$450.00
											Total VFD Incentive @$30/hp	$2265.00

(1) VFD incentives are calculated at a flat rate of $30 per horsepower controlled, up to a maximum of 500 hp controlled per VFD.
When a single VFD is used to control two motors in a lead/lag (standby, redundant) configuration, the controlled horsepower is considered to be that of one motor. For instance, if a single VFD controls two 30hp motors with one operating at a time, the incentive calculation is $900 (30hp x $30/hp).

(2) For VAV fan motors, enter 2790 Annual Hours of Operation. For HVAC pump motors, enter 5520 Annual Hours of Operation. For all other motor usage, please estimate your Annual Hours of Operation and attach an explanation of how you determined this value.

(3) For all motor and VFD applications, use the Load Factor (LF) default value of 0.75, unless data is available to support the use of a motor-specific LF other than 0.75. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Variable Frequency Drive Form

Please use one row per VFD

VFD and Controlled Motor Nameplate Data												Total Motor Incentive [1] $
Motor Application	Quantity Of VFDs	VFD Manufacturer	VFD Model Number	Unique Motor I.D.(s)	Motor Location	Enclosure Type: TEFC or ODP	Annual Hours of Operation[2]	Load Factor (LF) [3]	Motor Model Number	Motor HP	Motor Nominal Efficiency	
Fan	1	Toshiba	Q94160ERD	AHU SF2	Stranahan Soutl	TEFC	2790	.75	EM2333T	15	92.4	$450.00
Fan	1	Toshiba	Q94270ERD	AHU SF1	th and Human I	TEFC	2790	.75	EM4103T	25	93.6	$750.00
Fan	1	Toshiba	Q94270ERD	AHU EF1	Scott Park	TEFC	2790	.75	EM4103T	25	93.6	$750.00
Fan	1	Toshiba	Q94270ERD	AHU EF2	Misc	TEFC	2790	.75	EM4103T	25	93.6	$750.00
Fan	1	Toshiba	Q94270ERD	AHU EF	Stranahan Soutl	TEFC	2790	.75	EM4103T	25	93.6	$750.00
Fan	1	Toshiba	Q94330ERD	AHU SF	Hospital	TEFC	2790	.75	EM4104T	30	93.6	$900.00
Fan	1	Toshiba	Q94400IE	AHU SF	HSC Hospital	TEFC	2790	.75	EM4110T	40	94.1	$1200.00
Fan	1	Toshiba	Q94500EE	AHU EF	Misc	TEFC	2790	.75	EM4115T	50	94.5	$1500.00
											Total VFD Incentive @$30/hp	$7050.00

(1) VFD incentives are calculated at a flat rate of $30 per horsepower controlled, up to a maximum of 500 hp controlled per VFD.
When a single VFD is used to control two motors in a lead/lag (standby, redundant) configuration, the controlled horsepower is considered to be that of one motor. For instance, if a single VFD controls two 30hp motors with one operating at a time, the incentive calculation is $900 (30hp x $30/hp).

(2) For VAV fan motors, enter 2790 Annual Hours of Operation. For HVAC pump motors, enter 5520 Annual Hours of Operation. For all other motor usage, please estimate your Annual Hours of Operation and attach an explanation of how you determined this value.

(3) For all motor and VFD applications, use the Load Factor (LF) default value of 0.75, unless data is available to support the use of a motor-specific LF other than 0.75. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Table 1 – Minimum Motor Efficiency Requirements (NEMA Premium® Efficiencies)							
Open Drip Proof (ODP)				Totally Enclosed Fan-Cooled (TEFC)			
Size HP	# of Poles			Size HP	# of Poles		
	6	4	2		6	4	2
	Speed (RPM)				Speed (RPM)		
	1200	1800	3600		1200	1800	3600
1	82.50%	85.50%	77.00%	1	82.50%	85.50%	77.00%
1.5	86.50%	86.50%	84.00%	1.5	87.50%	86.50%	84.00%
2	87.50%	86.50%	85.50%	2	88.50%	86.50%	85.50%
3	88.50%	89.50%	85.50%	3	89.50%	89.50%	86.50%
5	89.50%	89.50%	86.50%	5	89.50%	89.50%	88.50%
7.5	90.20%	91.00%	88.50%	7.5	91.00%	91.70%	89.50%
10	91.70%	91.70%	89.50%	10	91.00%	91.70%	90.20%
15	91.70%	93.00%	90.20%	15	91.70%	92.40%	91.00%
20	92.40%	93.00%	91.00%	20	91.70%	93.00%	91.00%
25	93.00%	93.60%	91.70%	25	93.00%	93.60%	91.70%
30	93.60%	94.10%	91.70%	30	93.00%	93.60%	91.70%
40	94.10%	94.10%	92.40%	40	94.10%	94.10%	92.40%
50	94.10%	94.50%	93.00%	50	94.10%	94.50%	93.00%
60	94.50%	95.00%	93.60%	60	94.50%	95.00%	93.60%
75	94.50%	95.00%	93.60%	75	94.50%	95.40%	93.60%
100	95.00%	95.40%	93.60%	100	95.00%	95.40%	94.10%
125	95.00%	95.40%	94.10%	125	95.00%	95.40%	95.00%
150	95.40%	95.80%	94.10%	150	95.80%	95.80%	95.00%
200	95.40%	95.80%	95.00%	200	95.80%	96.20%	95.40%

Table 2 – Incentive Levels Per Motor							
Open Drip Proof (ODP)				Totally Enclosed Fan-Cooled (TEFC)			
Size HP	# of Poles			Size HP	# of Poles		
	6	4	2		6	4	2
	Speed (RPM)				Speed (RPM)		
	1200	1800	3600		1200	1800	3600
1	$20	$20	$20	1	$20	$20	$20
1.5	$25	$25	$25	1.5	$25	$25	$25
2	$54	$54	$54	2	$54	$54	$54
3	$54	$54	$54	3	$54	$54	$54
5	$54	$54	$54	5	$54	$54	$54
7.5	$70	$70	$70	7.5	$70	$70	$70
10	$70	$70	$70	10	$70	$70	$70
15	$113	$113	$113	15	$113	$113	$113
20	$113	$113	$113	20	$113	$113	$113
25	$140	$140	$140	25	$140	$140	$140
30	$170	$170	$170	30	$170	$170	$170
40	$200	$200	$200	40	$200	$200	$200
50	$230	$230	$230	50	$230	$230	$230
60	$260	$260	$260	60	$260	$260	$260
75	$290	$290	$290	75	$290	$290	$290
100	$320	$320	$320	100	$320	$320	$320
125	$350	$350	$350	125	$350	$350	$350
150	$380	$380	$380	150	$380	$380	$380
200	$400	$400	$400	200	$400	$400	$400

BUSINESS PROGRAM TERMS & CONDITIONS

Definitions	FIRSTENERGY COMPANIES ("THE COMPANY" OR "COMPANIES") – Toledo Edison, The Illuminating Company, and Ohio Edison. PROGRAM or Programs – Companies' programs approved by the Public Utilities Commission of Ohio ("PUCO") for implementation under Ohio Senate Bill 221. This application relates to the Business programs supporting energy efficiency in the Companies' Commercial and Industrial customer facilities including, municipal, government and institutional facilities. PROGRAM MANAGER – The party contracted by the Companies for management of the Programs. ENERGY-EFFICIENCY MEASURES – Any equipment or action eligible to receive a Program Incentive payment under the Program. PARTICIPANT (or PARTICIPATING CUSTOMERS) – Those non-residential electric retail service eligible customers of the Companies who participate in this Program. PROGRAM INCENTIVES – Refers to the monetary incentive, rebate or service that the Program provides to participating customers pursuant to the Program. CREDITS – Refers to the energy, capacity or environmental attributes from Alternative Energy Portfolio Standards (including Energy Efficiency and Demand Response) associated with measure for which incentives were provided, or PJM Capacity Credits.
Eligibility	"Participant" or "Participants" are Program customers identified above served by Toledo Edison, The Illuminating Company, and Ohio Edison as defined above. Residential customers are not eligible for incentives through the Commercial and Industrial Programs. Incentives are awarded only to Participants, or their assigned agents, for qualifying equipment ("Energy Efficiency Measures") that is installed in the State of Ohio at the location identified in this Application, and such Participants are responsible for compliance with the Terms and Conditions set forth herein.
Compliance	The Participant is responsible to comply with all applicable laws, rules and regulations, and to comply with all federal, state, and local codes.
Publicity	With Participant's written permission, the Companies may publicly recognize participation in the Programs and disclose information relating to the Participant's participation in the program, including such data as: projected project energy savings, the incentive amount, and other similar information.
Application and Eligibility Process	The Programs provide for payment of incentives after the installation of qualified energy efficiency measures and review of final documentation for compliance with program requirements by the Program Manager. In order to be eligible for incentives, a Participant, or an agent (contractor/vendor) authorized by the Participant, must submit a properly completed pre-installation application package, including an application and technology worksheets, to the Program Manager before the equipment is purchased. If eligible, the Participant will receive an approval letter with the estimated incentive amount and the date by which the equipment must be purchased and installed for the approval to remain in effect. After installation is completed, the Participant must finalize and resubmit the completed equipment application reflecting the "as built" project, along with the invoice, the manufacturer's equipment performance sheet, and any other required documentation as may be specified on the application or in the program's initial approval letter. Applications must be filled out completely, truthfully and accurately, and include signatures of the Participant and its authorized agents (as appropriate). Final payment will be based on the "as-built" documentation provided with the final project application.
Dates of Program	Incentives are available for eligible Energy Efficiency Measures for which equipment is purchased and installed on or after **April 11, 2011**. Dated Proof of Purchase and complete documentation will be required with final applications for the participant to be eligible for incentive payment. The program is subject to revision or termination at any time by the Companies.
Installation Schedule Requirements	Pre-approved projects will receive approval letters defining terms for payment and a commitment expiration date. If the Participant: (1) has not engaged in installation of the pre-approved project; and (2) has not applied to the Program Manager for a project extension within 90 days for all from the date the Program Manager pre-approves the project, the Program Manager may cancel Participant's application without liability.
Acceptable Proof of Purchase	Acceptable forms of Proof of Purchase include paid invoices or receipts. The documentation must show item numbers, quantities and descriptions that are of sufficient detail to verify that the installed equipment meets efficiency requirements. Additionally, the post-installation documentation must include manufacturers' specifications ("cut sheets") that list the efficiency ratings of the equipment. *The Progrom Manager may, at its sole discretion, accept other forms of proof of purchase.*
Evaluation, Measurement and Verification	The Program Manager may, but is not obligated to, conduct an inspection of the facility to verify pre- and post-installation conditions or verify documentation prior to incentive payment, at any time after receipt of applications and up to 5 years after payment of incentives. In addition, the Ohio Public Utility Commission and the Companies will engage Evaluation Measurement and Verification ("EM&V") contractors to evaluate program performance which may involve additional visits. The applicant must provide reasonable access to the facility, the equipment, and related documentation and data. The Companies or their agents may install simple/standard metering devices on equipment for program data collection, measurement and verification purposes. The Companies and their agents are not obligated to pay any incentive awards until it has performed a satisfactory post-installation verification, unless it has waived this requirement. If the Program Manager determines that the equipment was not installed in a manner consistent with the approved application, or if non-qualifying equipment was installed, it may require changes before making payment. If qualifying equipment cannot be located at the Participant's facility or is not installed in a manner consistent with the provisions of these Terms and Conditions, the Companies may seek recovery of the incentives paid.
Assignment	The Participant may assign Program Incentives to a specified third party.
Participating Customer's Certification	Participant certifies that he/she purchased and installed the equipment listed in its application at its defined Ohio location listed therein. Participant agrees that all information is true and that he/she has conformed to all of the program's eligibility requirements, terms and conditions.

Incentive Amounts	Program incentives will equal either: a) the approved Program Incentive amount reflecting incentives in effect at the time of approval, or b) the actual project cost of the Energy-Efficiency Measure, whichever is less, as determined by the Program Manager. Please allow ninety (90) business days for delivery of the Program Incentive. Applications requiring post-installation inspections and unanticipated high volume of activities may require additional time. If information is missing or incorrect on the application, processing and delivery of the Program Incentive may also require additional time.
Taxes	Incentives received by the Participant under this Application may be taxable by the federal, state, and local government. The Participant is responsible for declaring and paying all such taxes. Companies shall have no liability or obligation for any taxes.
Indemnification and Limits of Liability	The Participant shall protect, indemnify, and hold harmless the Companies' and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors from and against all liabilities, losses, claims of death or injury or other damages, judgments, penalties, causes of action, costs and expenses (including, without limitation, attorney's fees and expenses) incurred by or assessed against the Companies and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors arising out of or relating to the performance of this Application or arising out of or relating to the installation, use and maintenance of the equipment, designs, practices or methods involved in this Participant's project. In no event shall any indemnified party be liable for any punitive, exemplary, special, indirect, incidental or consequential damages (including, but not limited to, lost profits, lost business opportunities, loss of use or equipment down time, and loss of or corruption to data) arising out of or relating to this Agreement or Program, regardless of the legal theory under which such damages are sought.
Warranties	The Companies and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors make no express or implied warranties regarding the performance of installed equipment, the quality of any contractor's work, or that the equipment will result in any energy or cost savings. THE COMPANIES AND THEIR PARENTS, SUBSIDIARIES, AFFILIATES, AGENTS, CONTRACTORS, EMPLOYEES, OFFICERS AND DIRECTORS DO NOT ENDORSE, GUARANTEE, OR WARRANT ANY PARTICULAR MANUFACTURER OR PRODUCT, AND THEY PROVIDE NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR ANY PRODUCT OR SERVICES. THE COMPANIES AND THEIR PARENTS, SUBSIDIARIES, AFFILIATES, AGENTS, CONTRACTORS, EMPLOYEES, OFFICERS AND DIRECTORS ARE NOT LIABLE OR RESPONSIBLE FOR ANY ACT OR OMISSION OF ANY CONTRACTOR (IF ANY). THE CUSTOMER'S WARRANTIES ARE LIMITED TO ANY WARRANTIES THAT MAY BE PROVIDED BY CONTRACTORS, VENDORS OR EQUIPMENT MANUFACTURER. NEITHER THE COMPANIES NOR THEIR PARENTS, SUBSIDIARIES, AFFILIATES, AGENTS, CONTRACTORS, EMPLOYEES, OFFICERS AND DIRECTORS ARE RESPONSIBLE FOR ASSURING THAT THE DESIGN, ENGINEERING AND CONSTRUCTION OF THE FACILITY OR INSTALLATION OF THE EQUIPMENT IS PROPER OR COMPLIES WITH ANY PARTICULAR LAWS, CODES, OR INDUSTRY STANDARDS. THE COMPANIES AND THEIR PARENTS, SUBSIDIARIES, AFFILIATES, AGENTS, CONTRACTORS, EMPLOYEES, OFFICERS AND DIRECTORS DO NOT MAKE ANY REPRESENTATIONS OF ANY KIND REGARDING THE RESULTS TO BE ACHIEVED BY THE ENERGY EFFICIENCY MEASURES OR THE ADEQUACY OR SAFETY OF SUCH MEASURES.
Recycling (Proper Disposal of Waste)	The Companies and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors are not responsible for the proper disposal or recycling of any waste generated as a result of this project.
Endorsement (Product/Vendor Neutrality)	The Companies and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors do not endorse any particular market provider, manufacturer, product, labor or system design by offering this Program.
Termination	Incentives are available for energy efficiency measures on a first-come, first-served basis subject to the availability of funds. Program availability, program terms and equipment eligibility may change without notice at the discretion of the Companies. Submission of any application does not give rise to any obligation to make any incentive payment by the Companies and their parents, subsidiaries, affiliates, agents, contractors, employees, officers and directors.

ACKNOWLEDGEMENT

For faster application processing, please be sure to include the following items with your application form:

- [x] Complete application (Customer and project information page, equipment page, and signed acknowledgement page)
- [x] Utility account number (Customer and project information page)
- [x] Manufacturer specifications/technical cut sheets for all proposed equipment. **PLEASE BE SURE TO CIRCLE OR HIGHLIGHT THE RELEVANT INFORMATION (i.e. – equipment efficiency ratings)**
- [x] W-9 with Tax Identification associated with the incentive recipient (please submit with final application to facilitate faster incentive payment)
- [ ] [Optional] Copy of utility bill to confirm account number and service address. If desired, participant may obscure all cost and rate related information.

By participating in this program, customer agrees to allow their utility (The Cleveland Electric Illuminating Company, Ohio Edison Company or The Toledo Edison Company) to take ownership of the energy efficiency resource credits associated with the measures generated through this program. Your utility may, at its sole discretion, then aggregate your credits with other similarly situated customers and bid the credits 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 utility's customers for compliance with state mandated energy efficiency and/or peak demand requirements.

I read, understand and am in compliance with all rules and regulations concerning this program. I certify that all information provided is correct to the best of my knowledge, and I give the Companies permission to share my records with the Public Utility Commission of Ohio, or its contractors, who plan to evaluate my energy usage. Additionally, I will allow reasonable access to my property to verify the installation and performance of the Energy Efficiency Measures that are eligible for incentives under the programs.

Signature: _____ Date (MM/DD/YYYY): _____

Print name: _____ Title: _____

By signing, I certify that I have read, understood and agree to the terms and conditions listed above and that I am authorized to sign on behalf of the participant.

Submit Reset Form

INSTRUCTIONS: After clicking Submit above, if a new email message appears with this completed form attached, attach your supporting documentation (cut sheets,W-9 form, signature page, etc) to the email and click send. You can then save a copy of the completed form to your hard drive if you wish.

If a new email message does not appear, you'll need to save this completed form to your desktop. Then, create a new email message addressed to energysaveOhio@saic.com, attach the file you just saved as well as your supporting documentation (cut sheets, W-9 form, signature page, etc) to the email and click send.

Individual attachments may not exceed 3MB in size. The sum of all attachments may not exceed 10MB.
PDF documents can generally be reduced sufficiently by selecting "Reduce File Size" under the "Document" menu in Adobe Acrobat

Applications submitted electronically, using the "submit" button above, may be reviewed sooner.

Attachment C

GE Lighting

72262 - GE232MAX-L/ULTRA

GE LFL UltraMax™ Electronic High Efficiency Multivolt Instant Start Ballast

- Energy saving high efficiency instant start electronic ballast (> 90%)
- Multi-Voltage Technology handles voltage from 120 to 277V
- UL Type CC Rating provides protection against arcing in electrical devices.
- Active Current Regulation regulates the output to each lamp with individual lamp inverter modules.
- Anti-Striation Control for better light quality, with no striations.
- Cold temperature -20F Minimum Starting Temperature

GENERAL CHARACTERISTICS

Application	2 or 1- F32T8 120 to 277 "L".77 BF
Category	Linear Fluorescent
Ballast Type	Electronic - High Efficiency Multivolt Instant Start
Starting Method	Instant start
Lamp Wiring	Parallel
Line Voltage Regulation (+/-)	10.0 %
Case Temperature (MAX)	70.0 °C
Ballast Factor	Low (.77)
Power Factor Correction	Active
Sound Rating	A (20-24 decibels)
Additional Info	Anti-striation control / Auto-restart / Thermally protected

PRODUCT INFORMATION

Product Code	72262
Description	GE232MAX-L/ULTRA
Standard Package	Case
Standard Package GTIN	10043168722626
Standard Package Quantity	10
Sales Unit	Standard Pack
No Of Items Per Sales Unit	1
No Of Items Per Standard Package	10
UPC	043168722629

DIMENSIONS

Case dimensions

Length (L)	9.5 in(241.30 mm)
Width (W)	1.3 In(33.02 mm)
Height (H)	1.2 In(30.48 mm)

Mounting dimensions

Bracket Length (BL)	NaN In(NaN mm)
Mount Length (M)	9.0 in(228.60 mm)
Mount Width (X or F)	0.9 in(22.10 mm)
Mount Slots (MS)	0.3 In(8.20 mm)
Weight	1.4 lb
Exit Type	Side
Remote Mounting Distance	18.0 ft
Remote Mounting Wire Gauge	18.0 AWG

Lead lengths	Qty	Exit	Length (± 1 in.)
Black	1	Left	25 (635 mm)
Red	1	Left	37 (940 mm)
White	1	Left	25 (635 mm)
Blue	2	Right	31 (787 mm)

ELECTRICAL CHARACTERISTICS

Supply Current Frequency	50.0 Hz / 60.0 Hz

SAFETY & PERFORMANCE

- cUL Listed
- FCC - CLASS A Non-Consumer
- NRCan
- UL Class P
- UL Listed
- UL Type 1 Outdoor
- UL Type CC
- UL Type HL
- RoHs Compliant
- NEMA Premium®

SPECIFICATIONS BY LAMP & WATTAGE

Lamp	# of Lamps	Line Volts	System Watts	Nom. Line Current	System Ballast Factor	Ballast Efficacy Factor	Power Factor% (>=)	Crest Factor (<=)	THD% (<=)	Min. Starting Temp (°F/ °C)
FE15T8	1	120	14	0.12 A	0.78	5.57	99	1.5	12.0	0.0 °F / NaN
FE15T8	1	277	15	0.07 A	0.78	5.20	73	1.5	40.0	0.0 °F / NaN
FE15T8	2	120	21	0.18 A	0.78	3.71	99	1.5	9.0	0.0 °F / NaN
FE15T8	2	277	22	0.09 A	0.78	3.55	93	1.5	13.0	0.0 °F / NaN
F32T8/WM	1	120	27	0.23 A	0.78	2.89	99	1.5	8.0	60.0 °F / NaN
F32T8/WM	1	277	27	0.1 A	0.78	2.89	95	1.5	12.0	60.0 °F / NaN
F32T8/WM	2	120	47	0.39 A	0.78	1.66	99	1.5	5.0	60.0 °F / NaN

F32T8/WM	2	277	46	0.17 A	0.78	1.70	98	1.5	9.0	60.0 °F / NaN
F32T8/25W	1	120	22	0.0 A	0.77	3.50	99	1.5	10.0	60.0 °F / NaN
F32T8/25W	1	277	22	0.0 A	0.77	3.50	97	1.5	10.0	60.0 °F / NaN
F32T8/25W	2	120	38	0.0 A	0.77	2.03	99	1.5	10.0	60.0 °F / NaN
F32T8/25W	2	277	38	0.0 A	0.77	2.03	98	1.5	10.0	60.0 °F / NaN
F32T8	1	120	28	0.23 A	0.77	2.75	99	1.5	8.0	-22.0 °F / NaN
F32T8	1	277	28	0.11 A	0.77	2.75	95	1.5	12.0	-22.0 °F / NaN
F32T8	2	120	49	0.42 A	0.77	1.57	99	1.5	5.0	-22.0 °F / NaN
F32T8	2	277	48	0.18 A	0.77	1.60	98	1.5	8.0	-22.0 °F / NaN
F28T8	1	120	25	0.21 A	0.77	3.08	99	1.5	8.0	60.0 °F / NaN
F28T8	1	277	25	0.1 A	0.77	3.08	94	1.5	13.0	60.0 °F / NaN
F28T8	2	120	43	0.36 A	0.77	1.79	99	1.5	6.0	60.0 °F / NaN
F28T8	2	277	43	0.16 A	0.77	1.79	98	1.5	9.0	60.0 °F / NaN
F25T8	1	120	23	0.19 A	0.80	3.48	99	1.5	9.0	-22.0 °F / NaN
F25T8	1	277	23	0.09 A	0.80	3.48	93	1.5	13.0	-22.0 °F / NaN
F25T8	2	120	39	0.33 A	0.80	2.05	99	1.5	6.0	-22.0 °F / NaN
F25T8	2	277	39	0.14 A	0.80	2.05	97	1.5	10.0	-22.0 °F / NaN
F25T12	1	120	24	0.2 A	0.80	3.33	99	1.5	9.0	0.0 °F / NaN
F25T12	1	277	24	0.09 A	0.80	3.33	94	1.5	13.0	0.0 °F / NaN
F25T12	2	120	41	0.35 A	0.80	1.95	99	1.5	6.0	0.0 °F / NaN
F25T12	2	277	41	0.15 A	0.80	1.95	98	1.5	9.0	0.0 °F / NaN
F17T8	1	120	17	0.14 A	0.79	4.65	99	1.5	11.0	-22.0 °F / NaN
F17T8	1	277	17	0.08 A	0.79	4.65	80	1.5	36.0	-22.0 °F / NaN
F17T8	2	120	27	0.23 A	0.79	2.93	99	1.5	8.0	-22.0 °F / NaN
F17T8	2	277	27	0.1 A	0.79	2.93	95	1.5	12.0	-22.0 °F / NaN

CAUTIONS & WARNINGS

Warning

- Risk of Electric Shock
  - Properly ground ballast and fixture.
  - Turn power off before servicing--see instructions.

WARRANTY INFORMATION

GE Lighting warrants to the purchaser that each ballast will be free from defects in material or workmanship for period as defined in the attached documents from the date of manufacture when properly installed and under normal conditions of use.

GE Lighting

72866 - F28T8/XLSPX41ECO

GE Ecolux® UltraMax™ Starcoat® T8

• Passes TCLP, which can lower disposal costs

High Color Rendering
Energy Savings

Reduced Wattage

Photo
Not Available

Circle E

GENERAL CHARACTERISTICS

Lamp Type	Linear Fluorescent - Straight Linear
Bulb	T8
Base	Medium Bi-Pin (G13)
Rated Life	45000.0 hrs
Rated Life (Instant start) @ Time	24000 h @ 3 h
	30000 h @ 12 h
Rated Life (rapid start) @ Time	45000.0 @ 3.0/50000.0 @ 12.0 h
Bulb Material	Soda lime
Starting Temperature (MIN)	15.0 K
LEED-EB MR Credit	26 picograms Hg per mean lumen hour
Additional Info	TCLP compliant
Primary Application	Energy Saving

PHOTOMETRIC CHARACTERISTICS

Initial Lumens	2675.0
Mean Lumens	2515.0
Nominal Initial Lumens per Watt	95
Color Temperature	4100.0 K
Color Rendering Index (CRI)	82.0
S/P Ratio (Scotopic/Photopic Ratio)	1.8

ELECTRICAL CHARACTERISTICS

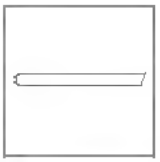
Wattage	28.0
Voltage	115.0
Open Circuit Voltage (Instant start) Min @ Temperature	550 V @ 15 nV
Cathode Resistance Ratio - Rh/Rc (MIN)	4.25
Cathode Resistance Ratio - Rh/Rc (MAX)	6.5
Lamp Current	0.275 A
Current Crest Factor (MAX)	1.7

DIMENSIONS

Maximum Overall Length (MOL)	48.0000 In(1219.2 mm)
Minimum Overall Length	47.7800 in(1213.6 mm)
Nominal Length	48.000 in(1219.2 mm)
Bulb Diameter (DIA) (MIN)	0.940 in(23.9 mm)
Bulb Diameter (DIA) (MAX)	1.100 in(27.9 mm)
Bulb Diameter (DIA)	1.000 In(25.4 mm)
Max Base Face to Base Face (A)	47.220 In(1199.4 mm)
Face to End of Opposing Pin (B) (MIN)	47.400 in(1204.0 mm)
Face to End of Opposing Pin (B) (MAX)	47.500 in(1206.5 mm)
End of Base Pin to End of Opposite Pin End (C)	47.670 In(1210.6 mm)

PRODUCT INFORMATION

Product Code	72866
Description	F28T8/XLSPX41ECO
Standard Package	Case
Standard Package GTIN	10043168728666
Standard Package Quantity	36
Sales Unit	Unit
No Of Items Per Sales Unit	1
No Of Items Per Standard Package	36
UPC	043168728669



CAUTIONS & WARNINGS

Caution

- Lamp may shatter and cause injury if broken
  - Wear safety glasses and gloves when handling lamp.
  - Do not use excessive force when installing lamp.

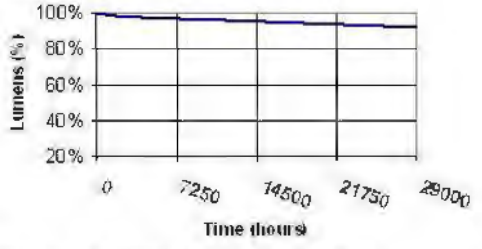
Warning

- Risk of Electric Shock
  - Turn power off before inspection, installation or removal.

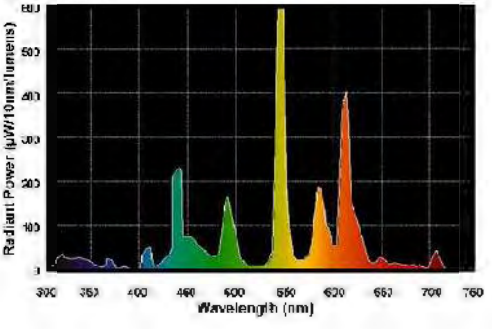
GRAPHS & CHARTS

Graphs_Lamp Mortality

Graphs_Lumen Maintenance



Graphs_Spectral Power Distribution



LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

Outdoor General Purpose

OLW14

LED WALL PACK

INTENDED USE

Provides maintenance-free general illumination for outdoor use in commercial applications such as retail, education, multi-unit housing and storage. Ideal for lighting building facades, parking areas, walkways, garages, loading areas and any other outdoor space requiring reliable safety and security.

CONSTRUCTION

Sturdy weather-resistant aluminum housing with a bronze finish, standard unless otherwise noted. A clear polycarbonate lens protects the optics from moisture, dirt and other contaminants.

Fixture is maintenance-free.

OPTICS

8 high performance 5470K LEDs are powered by a multi-volt (120V-277V) LED driver that uses 26.45 input watts and provides 1,436 delivered lumens. 50,000 hour average LED life means no lamp replacement.

See Lighting Facts label on page 2 for performance details.

ELECTRICAL

Rated for outdoor installations, -40°C minimum ambient.

Adjustable Dusk-to-dawn, multi-volt photocell standard automatically turns light on at dusk and off at dawn for convenience and energy savings.

Photocell can be disabled by rotating the photocell cover.

6kV surge protection standard.

INSTALLATION

Surface or recessed mount. A universal junction box is included standard.

All mounting hardware included.

LISTINGS

UL Certified to US safety standards. Optional (120V) C-UL Certified to Canadian safety standards. Wet location listed.

Tested in accordance with IESNA LM-79 and LM-80 standards.

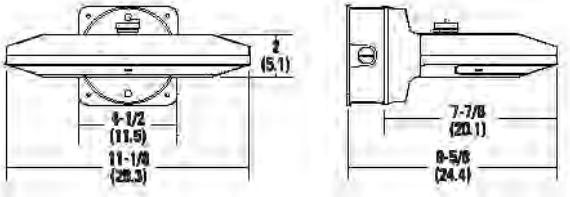
WARRANTY

5-year limited warranty. Complete warranty terms located at www.AcuityBrands.com/CustomerResources/Terms_and_Conditions.aspx.

NOTE: Specifications are subject to change without notice.

Dimensions

All dimensions are inches (centimeters)



ORDERING INFORMATION For shortest lead times, configure products using bolded options. **Example: OLW14**

OLW14									
Series		**Color Temperature (CCT)**		**Voltage**		**Features**		**Finish**	
OLW14	1400 lumen LED wall pack	(blank)	5700K[1]	(blank)	MVOLT (120V-277V)	(blank)	MVOLT photocell included	(blank)	Bronze
				120	120 Volt (available in white only)	CUL PE	Canadian-approved 120V photocell	WH	White

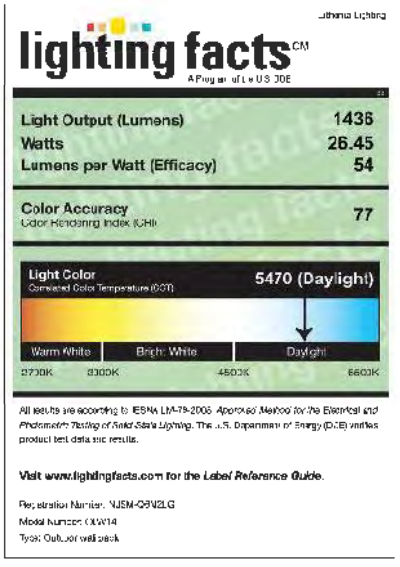
Accessories: Order as separate catalog number.	
FCOS M24	Full cutoff shield
FCOS WH M24	Full cutoff shield, white

Notes:
1 Correlated Color Temperature (CCT) shown is nominal per ANSI C78.377-2008.

LED Wall Pack

PHOTOMETRICS

Full photometric data report available within 2 weeks from request. Consult factory.
Tested in accordance with IESNA LM-79 and LM-80 standards.



LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

Outdoor General Purpose

OLW

LED WALL PACK

INTENDED USE

Provides maintenance-free general illumination for outdoor use in residential and commercial applications such as retail, education, multi-unit housing and storage. Ideal for lighting building facades, parking areas, walkways, garages, loading areas and any other outdoor space requiring reliable safety and security.

CONSTRUCTION

Sturdy weather-resistant aluminum housing with a bronze finish.

High performance LEDs are powered by an MVOLT driver that provides 2,300/3,100 delivered lumens at 5000K. 50,000 hour average LED life means no lamp replacement. Fixture is maintenance-free.

Operating temperature -30°C to 40°C.

Adjustable Dusk-to-Dawn, photocell standard automatically turns light on at dusk and off at dawn for convenience and energy savings.

Photocell can be disabled by rotating the photocell cover.

OPTICS

Precision-molded acrylic lenses provide optimal luminaire spacing with Type 3 distribution.

Nighttime Friendly™ full cutoff above 90° angle, standard.

INSTALLATION

Wall or arm mount (mounting arm sold separately).

All mounting hardware included.

LISTINGS

UL Certified to US safety standards. C-UL Certified to Canadian safety standards. Wet location listed.

Tested in accordance with IESNA LM-79 and LM-80 standards. DLC qualified product.

WARRANTY

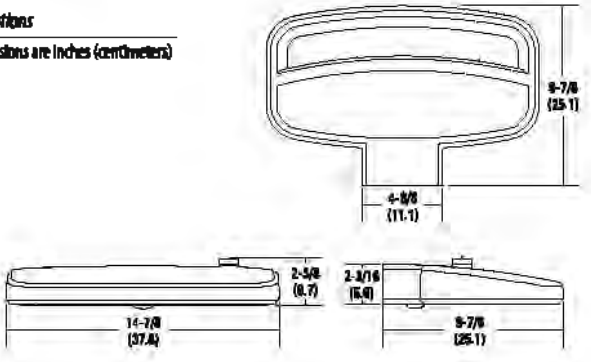
Five-year limited warranty.

Full warranty terms located at www.AcuityBrands.com/CustomerResources/Terms_and_Conditions.aspx.

NOTE: Specifications are subject to change without notice.

Specifications

All dimensions are inches (centimeters)



ORDERING INFORMATION For shortest lead times, configure products using **bolded options.**

Example: OLW 23

OLW	23			
Series	**Lumens / Color Temperature (CCT)**	**Voltage**	**Features**	**Finish**
OLW LED Wall Light	23 2300 delivered lumens / 5000K[1] 31 3100 delivered lumens / 5000K[1]	(blank) MVOLT (120V-277V)	(blank) Photocell included	(blank) DDB Dark Bronze

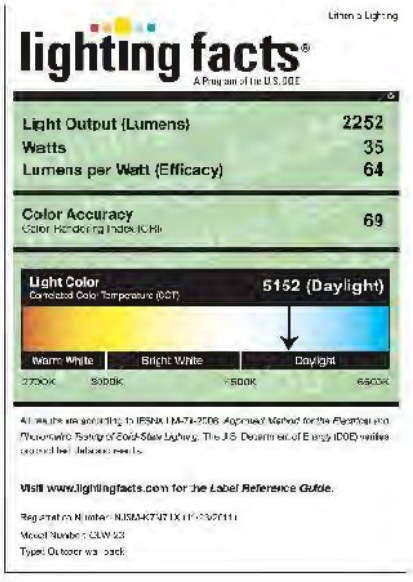
Accessories: Order as separate catalog number.	
OMA M6	14" Aluminum Mounting Arm

Notes

1 Correlated Color Temperature (CCT) shown is nominal per ANSI C78.377-2008.

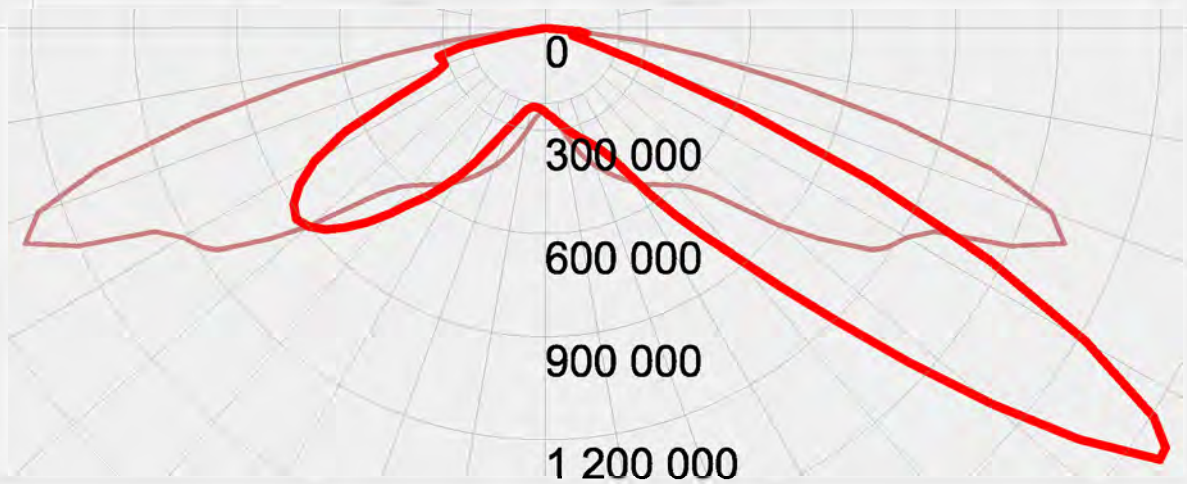
PHOTOMETRICS

Full photometric data report available within 2 weeks from request. Consult factory.
Tested in accordance with IESNA LM-79 and LM-80 standards.



Lamp=1 lm
Max=2 193 000 cd/klm
P 60x1=71 W
Multiplier=0.001
Degrees=0

Type C

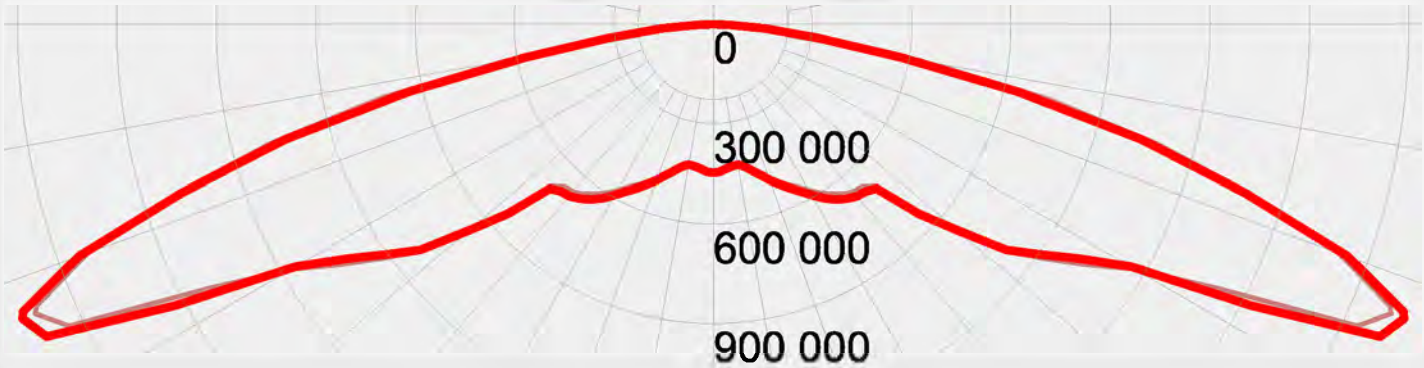


Rect 0.765625x0.296875 feet

Manufacturer: BetaLED, A Division of Ruud Lighting.
Luminaire catalog: SEC-EDG-3M-**-06-C-UL-43K (350mA) CONFIGURED
Luminaire: CONFIGURED FROM 40 LED TYPE III MEDIUM EDGE SECURI
Lamp: CONFIGURED FROM FORTY WHITE LIGHT EMITTING DIODES (LE

Lamp=1 lm
Max=2 265 000 cd/klm
P 60x1=110 W
Multiplier=0.001
Degrees=0

Type C



Rect 0.463542x0.765625 feet

Manufacturer: BETALED, A DIVISION OF RUUD LIGHTING
Luminaire catalog: ARE-EDR-5M-**-06-C-UL-525-43K (525mA) CONFIGUI
Luminaire: CONFIGURED FROM 60 LED TYPE V MEDIUM EDGE PARKIN
Lamp: CONFIGURED FROM SIXTY WHITE LIGHT EMITTING DIODES (LE

Attachment E

2MXV1

Item	General Purpose Motor
Motor Type	3-Phase
Enclosure	Totally Enclosed Fan-Cooled
HP	7-1/2
Nameplate RPM	1770
NEMA/IEC Frame	213T
Frame	213T
Voltage	208-230/460
Hz	60
Phase	3
Full Load Amps	19.5-17.7/8.9
Number of Speeds	1
Mounting	Base
Mounting Position	Horizontal Only
Thermal Protection	None
Insulation Class	F
Service Factor	1.15
Bearings	Ball
Frame Material	Cast Iron
Max. Ambient Temp.	40 Degrees C
Rotation	CW/CCW
Shaft Dia.	1-3/8"
Shaft Length	3-3/8"
Length Less Shaft	14-5/8"
Overall Length	18"
RPM Range	1400-1800
Standards	UL Recognized, CSA Certified, CE
Duty	Continuous
Efficiency Group	Prem Eff, MG1 Table 12-12
Nominal Efficiency	91.7%
Inverter Rated	Yes
Warranty (Years)	3 yr.
Footnotes	2,16,16
Green Certification or Other Recognition	NEMA Premium Rated
Green Environmental Attribute	Product Contributes To Reducing Energy Consumption

2MXW4

Item	General Purpose Motor
Motor Type	3-Phase
Enclosure	Totally Enclosed Fan-Cooled
HP	25
Nameplate RPM	1770
NEMA/IEC Frame	284T
Frame	284T
Voltage	208-230/460
Hz	60
Phase	3
Full Load Amps	64.3-58.2/29.1
Number of Speeds	1
Mounting	Base
Mounting Position	Horizontal Only
Thermal Protection	None
Insulation Class	F
Service Factor	1.15
Bearings	Ball
Frame Material	Cast Iron
Max. Ambient Temp.	40 Degrees C
Rotation	CW/CCW
Shaft Dia.	1-7/8"
Shaft Length	4-5/8"
Length Less Shaft	22-3/16"
Overall Length	26-13/16"
RPM Range	1400-1800
Standards	UL Recognized, CSA Certified, CE
Duty	Continuous
Efficiency Group	Prem Eff. MG1 Table 12-12
Nominal Efficiency	93.6%
Inverter Rated	Yes
Warranty (Years)	3 yr.
Footnotes	2,15,16
Green Certification or Other Recognition	NEMA Premium Rated
Green Environmental Attribute	Product Contributes To Reducing Energy Consumption

4GYZ8

Item	General Purpose Motor
Motor Type	3-Phase
Enclosure	Totally Enclosed Fan-Cooled
HP	10
Nameplate RPM	1755
NEMA/IEC Frame	215T
Frame	215T
Voltage	208-230/460
Hz	60
Phase	3
Full Load Amps	26.6-24.0/12.0
Number of Speeds	1
Mounting	Base
Mounting Position	Horizontal
Thermal Protection	None
Insulation Class	F
Service Factor	1.15
Bearings	Ball
Frame Material	Steel
Max. Ambient Temp.	40 Degrees C
Rotation	CW/CCW
Shaft Dia.	1-3/8"
Shaft Length	3-3/8"
Length Less Shaft	17-1/8"
Overall Length	20-1/2"
RPM Range	1400-1800
Standards	UL Recognized, CSA Certified, CE
Duty	Continuous
Efficiency Group	Prem Eff, MG1 Table 12-12
Nominal Efficiency	91.7%
Inverter Rated	Yes
Warranty (Years)	3 yr.
Footnotes	3,16
Green Certification or Other Recognition	NEMA Premium Rated
Green Environmental Attribute	Product Contributes To Reducing Energy Consumption

1TRX8

Item	Washdown Motor
Motor Type	3 Phase
Enclosure	Totally Enclosed Fan Cooled
HP	2
Nameplate RPM	1740
NEMA/IEC Frame	145T
Frame	145T
NEMA Design	B
Rotation	CW/CCW
Voltage	208-230/460
Full Load Amps	6.0-5.8/2.9
Phase	3
Hz	60
Mounting	Base
Bearings	Ball
Frame Material	Epoxy Coated Steel
Thermal Protection	None
Service Factor	1.15
Max. Ambient Temp.	40 Degrees C
Shaft Dia.	7/8"
Shaft Length	2"
Length Less Shaft	11-3/8"
Overall Length	13-3/8"
Insulation Class	F
RPM Range	1400-1800
Duty	Continuous
Shaft Material	303 Stainless Steel
Conduit Box	Cast Oversized Gasketed, Top Mounted
Drain Plugs	(10) Total - (4) Each End and (2) In Conduit Box
Nominal Efficiency	84.0%
Application	Washdown Feather Picker Motor
Standards	UL Recognized (E47479), CSA Certified (LR63595), USDA Approved, EPAct Efficient

4ETR7

Item	General Purpose Motor
Motor Type	3-Phase
Enclosure	Totally Enclosed Fan-Cooled
HP	10
Nameplate RPM	1765
NEMA/IEC Frame	215T
Frame	215T
Voltage	460
Hz	60/50
Phase	3
Full Load Amps	12.6
Number of Speeds	1
Mounting	Foot
Mounting Position	Horizontal/Vertical
Thermal Protection	None
Insulation Class	F
Service Factor	1.25
Bearings	Ball
Frame Material	Reinforced Cast Iron
Max. Ambient Temp.	40 Degrees C
Rotation	CW/CCW
Shaft Dia.	1-3/8"
Shaft Length	3-3/8"
Length Less Shaft	16-1/8"
Overall Length	19-1/2"
RPM Range	1400-1800
Standards	UL Recognized(E104590), CSA Certified (LR50,962-9/13/14), CE
Duty	Continuous
Efficiency Group	Prem Efficient, MG1 Table 12-12
Nominal Efficiency	91.7%
Inverter Rated	Yes
Warranty (Years)	2 yr.
Green Certification or Other Recognition	NEMA Premium Rated
Green Environmental Attribute	Product Contributes To Reducing Energy Consumption

General Information
- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information
- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient | 100 HP | 2800-3600 RPM |

Specifications: ECP4402T

SPEC. NUMBER:	P40G270
CATALOG NUMBER:	ECP4402T
AMBIENT-TEMPERATURE:	40
FL AMPS:	220/110
BEARING-DRIVE-END:	6313
BEARING-OPP-DRIVE-END:	6313
BRG-DE-AFBMA:	65BC03J30X
BRG-ODE-AFBMA:	65BC03J30X
DESIGN CODE:	B
DUTY:	CONT
FL EFFICIENCY:	95
EFFICIENCY-1:	95.1
EFFICIENCY-2:	94.5
EFFICIENCY-3:	--
ENCLOSURE:	TEFC
FRAME:	405TS
HERTZ:	60
HORSEPOWER:	100
INSULATION CLASS:	F
KVA-CODE:	F
SPEED [rpm]:	3565
MOTOR-WEIGHT:	--
PHASE:	3
POWER-FACTOR:	89.9
POWER-FACTOR-CORRECTION CAPAC:	10.0
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
TYPE:	P
VOLTAGE:	230/460

* For certified information, contact your local Baldor office.

General Information

- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information

- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | HVAC |

Specifications: ECTM3770T

SPEC. NUMBER:	07J564X790G1
CATALOG NUMBER:	ECTM3770T
FL AMPS:	19.8-19/9.5
208V AMPS:	19.8
BEARING-DRIVE-END:	6307
BEARING-OPP-DRIVE-END:	6206
DESIGN CODE:	A
DOE-CODE:	--
FL EFFICIENCY:	91.7
ENCLOSURE:	TEAO
FRAME:	213T
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	J
SPEED [rpm]:	1770
OUTPUT [hp]:	7.5
PHASE:	3
POWER-FACTOR:	81
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
VOLTAGE:	208-230/460

* For certified information, contact your local Baldor office.

General Information
- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information
- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient |

Specifications: EM2559T-4

SPEC. NUMBER:	44E195W047
CATALOG NUMBER:	EM2559T-4
FL AMPS:	143
208V AMPS:	--
BEARING-DRIVE-END:	6316
BEARING-OPP-DRIVE-END:	6312
CUSTOMER-PART-NUMBER:	--
DESIGN CODE:	B
DOE-CODE:	010A
FL EFFICIENCY:	95.4
ENCLOSURE:	OPSB
FRAME:	405T
GREASE:	POLYREX EM
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	G
MAX. SPACE HEATER TEMP.:	--
SPEED [rpm]:	1775
OUTPUT [hp]:	125
PHASE:	3
POWER-FACTOR:	86
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
SPACE-HEATER-AMPS:	--
SPACE-HEATER-VOLTS:	--
VOLTAGE:	460

* For certified information, contact your local Baldor office.

General Information

- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information

- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient |

Specifications: EM3558T

SPEC. NUMBER:	35AA001M494G1
CATALOG NUMBER:	EM3558T
FL AMPS:	6-5.8/2.9
208V AMPS:	--
BEARING-DRIVE-END:	6205
BEARING-OPP-DRIVE-END:	6203
DESIGN CODE:	B
DOE-CODE:	010A
FL EFFICIENCY:	86.5
ENCLOSURE:	TEFC
FRAME:	145T
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	L
SPEED [rpm]:	1755
OUTPUT [hp]:	2
PHASE:	3
POWER-FACTOR:	73
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
VOLTAGE:	208-230/460

* For certified information, contact your local Baldor office.

General Information

- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information

- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient |

Specifications: EM3615T

SPEC. NUMBER:	36G271S268G1
CATALOG NUMBER:	EM3615T
FL AMPS:	13.9-13.4/6.7
208V AMPS:	13.9
BEARING-DRIVE-END:	6206
BEARING-OPP-DRIVE-END:	6205
DESIGN CODE:	B
DOE-CODE:	010A
FL EFFICIENCY:	89.5
ENCLOSURE:	TEFC
FRAME:	184T
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	J
SPEED [rpm]:	1750
OUTPUT [hp]:	5
PHASE:	3
POWER-FACTOR:	78
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
VOLTAGE:	208-230/460

* For certified information, contact your local Baldor office.

General Information

- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information

- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient |

Specifications: EM3713T

SPEC. NUMBER:	37H244R228G1
CATALOG NUMBER:	EM3713T
FL AMPS:	36.8-34/17
208V AMPS:	--
BEARING-DRIVE-END:	6307
BEARING-OPP-DRIVE-END:	6206
DESIGN CODE:	A
DOE-CODE:	010A
FL EFFICIENCY:	91
ENCLOSURE:	TEFC
FRAME:	215T
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	J
SPEED [rpm]:	3500
OUTPUT [hp]:	15
PHASE:	3
POWER-FACTOR:	89
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
VOLTAGE:	208-230/460

* For certified information, contact your local Baldor office.

General Information
- Overview
- Specifications
- Performance Data
- Parts List
- Drawings

More Information
- Where To Buy
- Baldor Sales Offices

Return to List

AC Motors | Premium Efficient |

Specifications: EM4104T

SPEC. NUMBER:	10C151Y538G1
CATALOG NUMBER:	EM4104T
FL AMPS:	76/38
208V AMPS:	78
BEARING-DRIVE-END:	6311
BEARING-OPP-DRIVE-END:	6309
CUSTOMER-PART-NUMBER:	--
DESIGN CODE:	A
DOE-CODE:	010A
FL EFFICIENCY:	93.6
ENCLOSURE:	TEFC
FRAME:	286T
GREASE:	POLYREX EM
HERTZ:	60
INSULATION-CLASS:	F
KVA-CODE:	J
MAX. SPACE HEATER TEMP.:	--
SPEED [rpm]:	1760
OUTPUT [hp]:	30
PHASE:	3
POWER-FACTOR:	80
RATING:	40C AMB-CONT
SERIAL-NUMBER:	--
SERVICE FACTOR:	1.15
SPACE-HEATER-AMPS:	--
SPACE-HEATER-VOLTS:	--
VOLTAGE:	230/460

* For certified information, contact your local Baldor office.

DAYTON Mtr, 3 Ph, 7.5hp, 1770, 208-230/460, Eff 91.7

General Purpose Motor, 3-Phase, 7-1/2 HP, Nameplate RPM 1770, Voltage 208-230/460, 213T Frame, Totally Enclosed Fan Cooled, Number of Speeds 1, Full Load Amps 19.5-17.7/8.9, 60 Hz, Base Mounting, Thermal Protection None, Insulation Class F, Service Factor 1.15, Ball Bearings, Max. Ambient Temp. 40 Degrees C, Rotation CW/CCW, Overall Length 18 In., Shaft Dia. 1-3/8 In., Shaft Length 3-3/8 In.

Grainger Item #	2MXV1
Price (ea.)	$992.60
Brand	DAYTON
Mfr. Model #	2MXV1
UNSPSC #	26101612
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	197.0
Availability	Ready to Ship
Catalog Page No.	15
Country of Origin (Country of Origin is subject to change.)	Taiwan

Enlarge Image

Qty.

Add Grainger TripleGuard® repair & replacement coverage for $129.00 each.

Price shown may not reflect your price. Sign In or register.

When can I get it? Use your ZIP code to estimate availability.

Qty: ZIP code:

Tech Specs | Additional Information | Compliance & Restrictions | MSDS | Required Accessories | Optional Accessories | Alternate Products | Repair Parts

Item	General Purpose Motor
Motor Type	3-Phase
Enclosure	Totally Enclosed Fan Cooled
HP	7-1/2
Nameplate RPM	1770
NEMA/IEC Frame	213T
Frame	213T
Voltage	208-230/460
Hz	60
Phase	3
Full Load Amps	19.5-17.7/8.9
Number of Speeds	1
Mounting	Base
Mounting Position	Horizontal Only
Thermal Protection	None
Insulation Class	F
Service Factor	1.15
Bearings	Ball
Frame Material	Cast Iron
Max. Ambient Temp.	40 Degrees C
Rotation	CW/CCW
Shaft Dia.	1-3/8"
Shaft Length	3-3/8"
Length Less Shaft	14-5/8"
Overall Length	18"
RPM Range	1400-1800
Standards	UL Recognized, CSA Certified, CE
Duty	Continuous
Efficiency Group	Premium Efficient
Nominal Efficiency	91.7
Inverter Rated	Yes
Warranty (Years)	3 yr.
Footnotes	2,15,16
Green Certification or Other Recognition	NEMA Premium Rated
Green Environmental Attribute	Product Contributes To Reducing Energy Consumption

Customers Also Bought

1 of 5

Electronic Ballast, T8 Lamps, 120/277V
Brand: PHILIPS ADVANCE
Grainger Item #: 1VN22
Price: $47.70
Qty

Disposable Respirator, N95, Pk 10
Brand: 3M
Grainger Item #: 4JP99
Price: $32.80
Qty

Battery, AA, Performance Alkaline, Pk 24
Brand: DURACELL
Grainger Item #: 2HYL8
Price: $34.85
Qty

Cable Tie, 7.9in, Pk100
Brand: APPROVED VENDOR
Grainger Item #: 6DT54
Price: $8.61
Qty

CFL Ballast, Electronic, 64W, 120/277V
Brand: PHILIPS ADVANCE
Grainger Item #: 4ZZ35
Price: $47.00
Qty

Other Popular Terms for this Product

- Electric Motors (5161)
- Blower Motors (2422)
- Centrifugal Pump Motors (1650)
- Three-Phase General Purpose Motors (1152)
- Fan Motors (2976)
- Totally Enclosed Fan Cooled Motors (2076)
- Conveyor Motors (1602)
- Premium Efficiency Motors (1111)
- Industrial Motors (2946)
- Three-Phase Pump Motors (1775)
- Inverter-Duty Motors (1400)
- NEMA Motors (971)
- Pump Motors (2928)
- TEFC Three-Phase Motors (1582)
- Energy Efficient Motors (1210)

Read Reviews | Write Reviews | Ask And Answer

Product Reviews Disclaimer:
Grainger is neither responsible for, nor does it endorse, the content of any product review or statement posted. Any statements posted constitute the statements of the poster and are not the statements of Grainger. The statements posted by Grainger employees with the Grainger employee badge represent the views of such employees and are not the statements of Grainger. Grainger makes no representations as to the appropriateness, accuracy, completeness, correctness, currentness, suitability, or validity of any product review or statements posted, including those posted by employees with the Grainger employee badge, and is not liable for any losses, injuries or damages which may result from any such product review or statements. Use of any linked web site provided in a product review or post is at the user's own risk.

View Catalog Page | View Printable Page

Return To Top

Customers Also Viewed

Mtr, 3 Ph, 7.5hp, 1760, 208-230/460, Eff 91.7
Brand: DAYTON
Grainger Item #: 4GY28
Price: $876.00
Qty

Mtr, 3 Ph, 7.5hp, 1765, 208-230/460, Eff 91.7
Brand: WEG
Grainger Item #: 6AJC5
Price: $975.60
Qty

Mtr, 3 Ph, 7.5hp, 1755, 208-230/460, Eff 91.0
Brand: DAYTON
Grainger Item #: 4GZA7
Price: $701.60
Qty

Mtr, 3 Ph, 7.5hp, 1760, 208-230/460, Eff 91.0
Brand: WEG
Grainger Item #: 12XTW5
Price: $808.00
Qty

Attachment G

10 HP Motor Replacement			
Quantity	1		
Motor HP Baseline	10.0		
Motor HP Actual	10.0		
Motor Efficiency Baseline	85.0		
Motor Efficiency Actual	93.6		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	1687.4	18364.8	16677.4
5 HP Motor Replacement			
Motor HP Baseline	5.0		
Motor HP Actual	5.0		
Motor Efficiency Baseline	85.0		
Motor Efficiency Actual	89.5		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	461.7	9182.4	8720.7
7.5 HP Motor Replacement			
Motor HP Baseline	7.5		
Motor HP Actual	7.5		
Motor Efficiency Baseline	90.0		
Motor Efficiency Actual	91.7		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	241.2	13008.4	12767.2
2 HP Motor Replacement			
Motor HP Baseline	2.0		
Motor HP Actual	2.0		
Motor Efficiency Baseline	80.0		
Motor Efficiency Actual	86.5		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	293.3	3902.5	3609.3
7.5 HP Motor Replacement			
Motor HP Baseline	7.5		
Motor HP Actual	7.5		
Motor Efficiency Baseline	89.5		
Motor Efficiency Actual	91.7		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	313.8	13081.0	12767.2

200 HP Motor Replacement			
Motor HP Baseline	200.0		
Motor HP Actual	200.0		
Motor Efficiency Baseline	94.0		
Motor Efficiency Actual	96.2		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	7595.5	332128.7	324533.3

25 HP Motor Replacement			
Motor HP Baseline	25.0		
Motor HP Actual	25.0		
Motor Efficiency Baseline	91.0		
Motor Efficiency Actual	93.6		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	1191.2	42884.8	41693.5

10 HP Motor Replacement			
Quantity	2		
Motor HP Baseline	10.0		
Motor HP Actual	10.0		
Motor Efficiency Baseline	85.0		
Motor Efficiency Actual	91.7		
Load Factor	0.75		
Total Run Hours	2790.0		
		Before	After
Annual Energy Savings	1341.8	18364.8	17023.0

Motor savings total

13125.8

Before

450917.3

After

437791.5

Mercantile Customer Project Commitment Agreement
Cash Rebate Option

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between The Toledo Edison Company, its successors and assigns (hereinafter called the "Company") and University of Toledo, Taxpayer ID No 34-6401483 its permitted successors and assigns (hereinafter called the "Customer") (collectively the "Parties" or individually the "Party") and is effective on the date last executed by the Parties as indicated below

WITNESSETH

WHEREAS, the Company is an electric distribution utility and electric light company, as both of these terms are defined in R.C. § 4928 01(A); and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

i A narrative description of the Customer Energy Project(s), including but not limited to, make, model and year of any installed and/or replaced equipment,

ii. A copy of this Agreement; and

iii. A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results.

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

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

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

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

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

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

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

a If the Commission fails to approve the Joint Agreement;

b. Upon order of the Commission, or

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

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

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

a. Notwithstanding the above, a Party may disclose to its employees, directors, attorneys, consultants and agents all documents and information furnished by the other Party in connection with this Agreement, provided that such employees, directors, attorneys,

consultants and agents have been advised of the confidential nature of this information and through such disclosure are deemed to be bound by the terms set forth herein

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

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

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

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

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

If to the Company:

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

If to the Customer:

The University of Toledo
2801 W Bancroft St
Toledo OH 43606
Attn.Michael Green
Telephone.419.530.1036
Fax:
Email:

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

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

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

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

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

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

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

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

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

The Toledo Edison Company_
(Company)

By: _____

Title: V.P. Of Energy Efficiency

Date: 5-7-13

University of Toledo_
(Customer)

By: _____

Title: Director Energy

Date: 4/26/13

Affidavit of University of Toledo – Exhibit _A_

STATE OF OHIO)
) SS:
COUNTY OF Lucas)

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

1 I am the Director, Energy Management of University of Toledo ("Customer") As part of my duties, I oversee energy related matters for the Customer.

2 The Customer has agreed to commit certain energy efficiency projects to The Toledo 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 Cash ("Incentive") This Incentive was a critical factor in the Customer's decision to go forward with the Project(s) and to commit the Project(s) to the Company

4. All information related to said Project(s) that has been submitted to the Company is true and accurate to the best of my knowledge

FURTHER AFFIANT SAYETH NAUGHT

Sworn to before me and subscribed in my presence this 7th day of July, 2015

Notary

NOTARIAL SEAL STATE OF OHIO

DIANA SUE HALDER
Notary Public State of Ohio
Wood County
My Commission Expires Dec 16, 2018

Summary: Application to Commit Energy Efficiency/Peak Demand Reduction Programs of The Toledo Edison Company and University of Toledo electronically filed by Ms. Jennifer M. Sybyl on behalf of The Toledo Edison Company and University of Toledo