



Public Utilities Commission

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

Case No.: 13 - 0107 -EL-EEC

Mercantile Customer: TVI, Inc

Electric Utility: The Toledo Edison Company

Program Title or
Description: Energy Efficient Upgrade

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:TVI, Inc.

Principal address:11400 SE 6th Street, STE 200, Bellevue, WA 98004

Address of facility for which this energy efficiency program applies:3550 Executive
Parkway, Toledo, OH 43606

Name and telephone number for responses to questions:Robert Hoglund, 425-456-1766

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: Please Select an Operating Company 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): ____.
- ☐ 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: 58965 kWh

- 2) If you checked the box indicating that the customer installed new equipment to replace equipment that needed to be replaced, then calculate the annual savings [(kWh used by less efficient new equipment) - (kWh used by the higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: ____ kWh

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

- 3) If you checked the box indicating that the project involves equipment for new construction or facility expansion, then calculate the annual savings [(kWh used by less efficient new equipment) - (kWh used by higher efficiency new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: _____ kWh

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

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

Section 4: Demand Reduction/Demand Response Programs

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

- ☒ Coincident peak-demand savings from the customer's energy efficiency program.
- ☐ Actual peak-demand reduction. (Attach a description and documentation of the peak-demand reduction.)
- ☐ Potential peak-demand reduction (check the one that applies):
 - ☐ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a tariff of a regional transmission organization (RTO) approved by the Federal Energy Regulatory Commission.
 - ☐ The customer's peak-demand reduction program meets the requirements to be counted as a capacity resource under a program that is equivalent to an RTO program, which has been approved by the Public Utilities Commission of Ohio.

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

9/12/2011

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

17 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 \$2211. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

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

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

OR

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

OR

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

Section 6: Cost Effectiveness

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

- ☐ Total Resource Cost (TRC) Test. The calculated TRC value is: _____(Continue to Subsection 1, then skip Subsection 2)
- ☒ Utility Cost Test (UCT) . The calculated UCT value is: **See Exhibit 3** (Skip to Subsection 2.)

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

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

The electric utility's avoided supply costs were _____.

Our program costs were _____.

The incremental measure costs were _____.

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

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

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

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

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

Section 7: Additional Information

Please attach the following supporting documentation to this application:

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



Public Utilities Commission

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

Case No.: 13-0107 -EL-EEC

State of Ohio :

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

1. I am the duly authorized representative of:

TVI, Inc.

[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.

Michelle McCormick Accounting Manager
Signature of Affiant & Title

Sworn and subscribed before me this 13th day of March, 2012 Month/Year

David Hatlestad
Signature of official administering oath

DAVID HATLESTAD
Print Name and Title

My commission expires on APRIL 19, 2015



Customer Legal Entity Name: TVI, Inc. (dba Savers)
Site Address: Savers #1146
Principal Address: 3550 Executive Parkway

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	Savers #1146	Savers performed an Energy Efficient Retrofit to replace 165 150W Metal Halides with 8' 4 Lamp 28W T8 Fixtures.	"12-3091_Savers #1146_TE _Lighting Project Cash Rebate Form.xls" was used to calculate savings between existing and proposed equipment. See attached worksheet.	The estimated remaining useful service life of the fixtures was 1 year.	N/A

Exhibit 2

Customer Legal Entity Name: TVI, Inc. (dba Savers)

Site Address: Savers #1146

Principal Address: 3550 Executive Parkway

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) <i>Note 1</i>
2011	407,400	407,400	423,716
Average	407,400	407,400	423,716

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>	Commitment Payment \$
1	Savers #1146	09/22/2011	\$37,822	\$18,911	58,965	58,965	17	\$2,948	\$2,211	
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
					-	-	-			
		Total	\$37,822		58,965	58,965	17	\$2,948	\$2,211	\$0

Docket No. 13-0107

Site: 3550 Executive Parkway

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	59	\$ 308	\$ 18,178	\$ 4,050	\$2,211	\$0	\$ 6,261	2.9
Total	59	\$ 308	18,178	4,050	\$2,211	\$0	6,261	2.9

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)

TVI, Inc. (dba Savers) ~ Savers #1146
Docket No. 13-0107

Site: 3550 Executive Parkway

Lighting Inventory Form

Applicant Name:	Marcello Crestani
Facility Name:	Savers #1146
Date:	12/2/2011

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.

[illegible]

PROJECT BASIC INFORMATION							PRE-INSTALLATION					POST-INSTALLATION					Energy Calculations										Post Fixture								
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 <small>Drop down</small>	Existing Sensor Quantity <small>When applicable</small>	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control <small>Please enter DALI,IG, OCC or NONE</small>	Proposed Sensor Quantity <small>When applicable</small>	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	Demand Savings (kW)	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)	Annual Exterior Fixture kWh Saved (excluding CFLs or Exit Signs)	Annual kWh Saved (CFL or LED exit signs only)	Annual kWh Saved (Sensors only)	Post Fixture Number
118											NONE						NONE																		
119											NONE						NONE																		
120											NONE						NONE																		
121											NONE						NONE																		
122											NONE						NONE																		
123											NONE						NONE																		
124											NONE						NONE																		
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159											NONE						NONE																		
160											NONE						NONE																		
161											NONE						NONE																		

PROJECT BASIC INFORMATION							PRE-INSTALLATION						POST-INSTALLATION						Energy Calcululations												Post Fixture Cut Sheet Number						
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 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	Demand Savings (kW)	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)		Annual Exterior Fixture kWh Saved (excluding CFLs or Exit Signs)	Annual kWh Saved (CFL or LED exit signs only)	Annual kWh Saved (Sensors only)			
247											NONE						NONE																				
248											NONE						NONE																				
249											NONE						NONE																				
250											NONE						NONE																				
Totals							165			31.35			165			14.19			17.16										20.47			58.965					
																			17.16																	58.965	

Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	58,965
Total Change in Connected Load	17.16

Annual Estimated Cost Savings	\$5,896.50
Annual Operating Hours	3,068

Interior Lighting Incentive @ \$0.05/kWh (excluding CFLs, sensors, or LED exit signs)	\$2,948.25
Exterior Lighting Incentive @ \$0.50/W (excluding CFLs, sensors, or LED exit signs)	\$0.00
Total CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all CFLs, both interior and exterior)	\$0.00
Total 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	\$2,948.25
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Total Fixture Quantity excluding CFLs and LED Exit Sign	165
Total Lamp Quantity for Screw-In CFLs	0
Total Lamp Quantity for Hard-Wired CFLs	0
Total Fixture Quantity for 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) for facility type "Other" indicated on the Lighting Form tab

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Demand Savings (For Internal Use Only)	20.47
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MRS

**Intended Use**

The MRS strip and industrial retrofit kits are designed to convert existing 4' or 8' strip fixtures to more energy-efficient lamp and ballast technology. Universal bracket design allows easy retrofit to re-lamp or de-lamp, reduce energy consumption, and reduce lamp replacement costs.

Features

Channel covers for strip-to-strip conversion are high-reflectance white painted

aluminum and are secured by included quarter-turn brackets. Industrial reflectors are precision-formed aluminum for optimal performance and are available with high-reflectance white or with highly specular anodized aluminum.

Socket brackets are white pre-painted die-formed aluminum and are adjustable to fit strip widths from 4.0" to 5-1/4". Screw slots allow for easy 48" bracket center-

ing. Edges are rounded for installer safety.

Installs quickly and easily using self-taping Tek screws (included). All products ship as components packaged in job packs for minimal waste at the installation site. Consult factory for component job-pack quantities.

Listings

UL/CUL Listed (standard except for 347V; consult factory). Consult factory for NOM availability.

ORDERING INFORMATION

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

Example: MRS8 2 32 MVOLT 1/4 BINP WHR

Series	Number of lamps ¹	Lamp type	Voltage	Ballast configuration	Ballast ¹	Reflectors ¹
MRS4 4' long	1	32 32WT8 (48")	(blank) No ballast, IS ²	(blank) No ballast	(blank) No ballast ²	(blank) White painted channel cover (no reflector)
MRS8 8' long	2	28T5 28WT5 (46")	L/BRS No ballast, RS	1/4 One 4-lamp ballast	<u>T8</u>	WHR White industrial reflector
		54T5HO 54WT5HO (46")	MVOLT Multi-volt	1/2 One 2-lamp ballast	BINP T8 high-performance ballast, normal ballast factor (.88), instant start	SSR Specular industrial reflector, 95% reflective
			347 347V ³	1/3 One 3-lamp ballast	BILP T8 high-performance ballast, low ballast factor (.78), instant start	
				2/2 Two 2-lamp ballasts	BIHP T8 high-performance ballast, high ballast factor (1.2), instant start ⁴	
					<u>T5</u>	
					GEB95 Ballast factor (.95), program start	
					<u>T5HO</u>	
					GEB10PS Ballast factor (1.0), program start	

ADDITIONAL INFORMATION

For additional product information, visit www.lithonia.com.

Notes

- 1 All components (channel covers or reflectors, sockets, socket brackets and lamps) ship separately in bulk quantities. Consult factory for details.
- 2 When no ballast is selected, standard lampholders shipped will be instant start (IS) sockets. If rapid start (RS) sockets are required, select "L/BRS".
- 3 Consult factory for ballast availability / compatibility.
- 4 Not available in 347V.

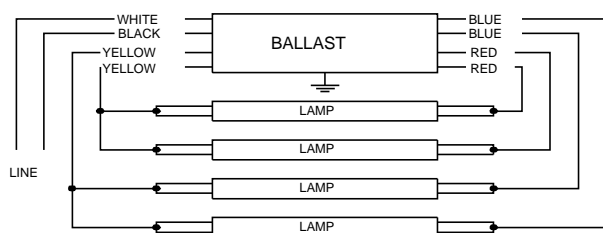
Electrical Specifications

IOPA4P32LWSC@120V

Brand Name	OPTANIUM
Ballast Type	Electronic
Starting Method	Instant Start
Lamp Connection	Parallel
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Lamp Type	Num. of Lamps	Rated Lamp Watts	Min. Start Temp (°F/C)	Input Current (Amps)	Input Power (ANSI Watts)	Ballast Factor	MAX THD %	Power Factor	MAX Lamp Current Crest Factor	B.E.F .
F32T8/ES (28W)	3	28	60/16	0.58	69	0.85	10	0.99	1.6	1.23
* F32T8/ES (28W)	4	28	60/16	0.71	84	0.77	10	0.99	1.6	0.92

Wiring Diagram



Diag. 66

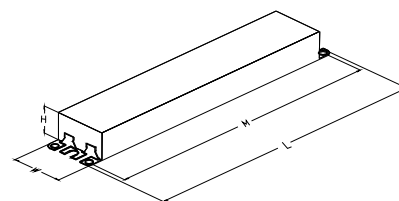
The wiring diagram that appears above is for the lamp type denoted by the asterisk (*)

Standard Lead Length (inches)

	in.	cm.
Black	25	63.5
White	25	63.5
Blue	31	78.7
Red	31	78.7
Yellow	39	99.1
Gray		0
Violet		0

	in.	cm.
Yellow/Blue		0
Blue/White		0
Brown		0
Orange		0
Orange/Black		0
Black/White		0
Red/White		0

Enclosure



Enclosure Dimensions

OverAll (L)	Width (W)	Height (H)	Mounting (M)
9.50 "	1.7 "	1.18 "	8.90 "
9 1/2	1 7/10	1 9/50	8 9/10
24.1 cm	4.3 cm	3 cm	22.6 cm

Revised 03/02/2010



Data is based upon tests performed by Philips Lighting Electronics N.A. in a controlled environment and is representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

PHILIPS LIGHTING ELECTRONICS N.A.

10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018

Tel: 800-322-2086 · Fax: 888-423-1882 · www.philips.com/advance

Customer Support/Technical Service: 800-372-3331 · OEM Support: 866-915-5886



IOPA4P32LWSC@120V

Brand Name	OPTANIUM
Ballast Type	Electronic
Starting Method	Instant Start
Lamp Connection	Parallel
Input Voltage	120-277
Input Frequency	50/60 HZ
Status	Active

Electrical Specifications

Notes:

Section I - Physical Characteristics

- 1.1 Ballast shall be physically interchangeable with standard electromagnetic or standard electronic ballasts, where applicable.
- 1.2 Ballast shall be provided with integral leads color-coded per ANSI C82.11.

Section II - Performance Requirements

- 2.1 Ballast shall be _____ (Instant or Programmed) Start.
- 2.2 Ballast shall provide Independent Lamp Operation (ILO) for Instant Start or Programmed Start Parallel ballasts allowing remaining lamp(s) to maintain full light output when one or more lamps fail.
- 2.3 Ballast shall contain auto restart circuitry in order to restart lamps without resetting power.
- 2.4 Ballast shall operate from 50/60 Hz input source of 120V through 277V with sustained variations of +/- 10% (voltage and frequency).
GOPA ballasts shall operate from an input source of 347V.
- 2.5 Ballast shall be high frequency electronic type and operate lamps at a frequency between 42 kHz and 52 kHz to avoid interference with infrared devices, eliminate visible flicker and avoid Article Surveillance System, such as anti-theft devices.
- 2.6 Ballast shall have a Power Factor greater than 0.98 for primary lamp.
- 2.7 Ballast shall have a minimum ballast factor for primary lamp application as follows: 0.77 for Low Watt, 0.87 for Normal Light Output, and 1.18 for High Light for Instant Start ballasts or 0.71 for Low Watt and 0.88 for Normal Light Output for Programmed Start ballasts.
- 2.8 Ballast shall provide for a Lamp Current Crest Factor of 1.7 or less.
- 2.9 Ballast input current shall have Total Harmonic Distortion (THD) of less than 10% when operated at nominal line voltage with primary lamp.
- 2.10 Ballast shall have a Class A sound rating for all 4-foot lamps and smaller.
- 2.11 Ballast shall have a minimum starting temperature of -29C (-20F) on Instant Start ballasts or -18C (0F) on Programmed Start ballasts for standard T8 lamps and 16C (60F) for energy-saving T8 lamps. Consult lamp manufacturer for temperature versus light output characteristics.
- 2.12 Ballast shall tolerate sustained open circuit and short circuit output conditions.
- 2.13 Ballast shall have lamp striation-reduction circuitry.
- 2.14 Programmed Start ballast shall provide lamp EOL protection circuitry.
- 2.15 Maximum remote distance for Energy Saving Lamps in Remote/Tandem applications is 6 feet for ICN, IOP, and IOPA Instant Start and Programmed Start models.

Section III - Regulatory Requirements

- 3.1 Ballast shall not contain any Polychlorinated Biphenyl (PCB).
- 3.2 Ballast shall be Underwriters Laboratories (UL) listed, Class P and Type 1 Outdoor; and Canadian Standards Association (CSA) certified where applicable.
- 3.3 Ballast shall comply with ANSI C62.41 Category A for Transient protection.
- 3.4 Ballast shall comply with ANSI C82.11 where applicable.
- 3.5 Ballast shall comply with the requirements of the Federal Communications Commission (FCC) rules and regulations, Title 47 CFR part 18, Non-Consumer (Class A) for EMI/RFI (conducted and radiated).
- 3.6 IOP and IOPA Ballasts shall meet NEMA Premium/CEE High Performance T8 Lighting System Specifications.
- 3.7 IOP ballasts shall comply with UL Type CC rating.
- 3.8 Ballast shall comply with NEMA 410 for in-rush current limits.
- 3.9 Ballast shall meet RoHS Compliance Standards

Section IV - Other

- 4.1 Ballast shall be manufactured in an ISO 9001 Qualified factory.
- 4.2 Ballast shall carry a five-year warranty from date of manufacture against defects in material or workmanship, including replacement, for operation at a maximum case temperature of 70C. Ballasts with a "90C" designation in their catalog number shall also carry a three-year warranty at maximum case temperature of 90C.

4.3 Manufacturer shall have a twenty-year history of producing electronic ballasts for the North American market.

Notes:

1. Energy-saving T8 lamps (25W, 28W or 30W) may experience lamp striations if operated on ballasts not rated for their use.

Revised 03/02/2010



Data is based upon tests performed by Philips Lighting Electronics N.A. in a controlled environment and is representative of relative performance. Actual performance can vary depending on operating conditions. Specifications are subject to change without notice. All specifications are nominal unless otherwise noted.

PHILIPS LIGHTING ELECTRONICS N.A.

10275 WEST HIGGINS ROAD · ROSEMONT, IL 60018

Tel: 800-322-2086 · Fax: 888-423-1882 · www.philips.com/advance

Customer Support/Technical Service: 800-372-3331 · OEM Support: 866-915-5886



Energy Advantage™ T8

F32T8 ADV850 EW ALTO II

Philips Energy Advantage T8 lamps offer high energy savings in an environmentally responsible lamp.

Product data

• General Characteristics

Base	Medium Bi-Pin [Medium Bi-Pin Fluorescent]
Base Information	Green Base
Bulb	T8
Energy Saving	Energy Saving
Rated Avg Life [12-Hr Prog St]	36000 hr
Rated Avg Life [12-Hr Inst St]	30000 hr
Rated Avg Life [3-Hr Prog St]	30000 hr
Rated Avg Life [3-Hr Inst St]	24000 hr

• Electrical Characteristics

Lamp Wattage	28 W
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• Environmental Characteristics

Mercury (Hg) Content	1.7 mg
Picogram per Lumen Hour	27 p/LuHr

• Light Technical Characteristics

Color Code	Advantage 850 [CCT of 5000K]
------------	------------------------------

Color Rendering Index	82 Ra8
Color Designation	Advantage 850
Color Temperature	5000 K
Initial Lumens	2675 Lm
Design Mean Lumens	2595 Lm

• Product Dimensions

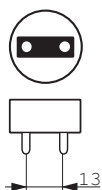
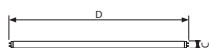
Nominal Length [inch]	48
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• Product Data

Order code	927852285101
Full product code	927852285101
Full product name	F32T8 ADV850 EW ALTO II
Order product name	F32T8 ADV850 EW ALTO II
Pieces per pack	1
Packing configuration	25
Packs per outerbox	25
Bar code on pack - EAN1	46677147358
Bar code on outerbox - EAN3	50046677147353
Logistic code(s) - 12NC	927852285101
Net weight per piece	0.001 kg

PHILIPS
sense and simplicity

Dimensional drawing



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Specifications are subject to change without notice. Trademarks are the property of Koninklijke Philips Electronics N.V. or their respective owners.

www.philips.com/lighting

2011, May 10
data subject to change

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 TVI Inc. dba Savers, Taxpayer ID No. 91-1255756 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:

TVI Inc. dba Savers
11400 SE 6th St.
Suite 220
Bellevue, WA 98004
Attn: Kirk Bezanson
Telephone: (425) 456-1757
Fax: n/a
Email: KBezanson@savers.com

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

8. **Authority to Act.** The Parties represent and warrant that they are represented by counsel in connection with this Agreement, have been fully advised in connection with the execution thereof, have taken all legal and corporate steps necessary to enter into this Agreement, and that the undersigned has the authority to enter into this Agreement, to bind the Parties to all provisions herein and to take the actions required to be performed in fulfillment of the undertakings contained herein.
9. **Non-Waiver.** The delay or failure of either party to assert or enforce in any instance strict performance of any of the terms of this Agreement or to exercise any rights hereunder conferred, shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon such terms or rights at any later time or on any future occasion.
10. **Entire Agreement.** This Agreement, along with related exhibits, and the Company's Rider DSE, or its equivalent, as amended from time to time by the Commission, contains the Parties' entire understanding with respect to the matters addressed herein and there are no verbal or collateral representations, undertakings, or agreements not expressly set forth herein. No change in, addition to, or waiver of the terms of this Agreement shall be binding upon any of the Parties unless the same is set forth in writing and signed by an authorized representative of each of the Parties. In the event of any conflict between Rider DSE or its equivalent and this document, the latter shall prevail.
11. **Assignment.** Customer may not assign any of its rights or obligations under this Agreement without obtaining the prior written consent of the Company, which consent will not be unreasonably withheld. No assignment of this Agreement will relieve the assigning Party of any of its obligations under this Agreement until such obligations have been assumed by the assignee and all necessary consents have been obtained.
12. **Severability.** If any portion of this Agreement is held invalid, the Parties agree that such invalidity shall not affect the validity of the remaining portions of this Agreement, and the Parties further agree to substitute for the invalid portion a valid provision that most closely approximates the economic effect and intent of the invalid provision.
13. **Governing Law.** This Agreement shall be governed by the laws and regulations of the State of Ohio, without regard to its conflict of law provisions.
14. **Execution and Counterparts.** This Agreement may be executed in multiple counterparts, which taken together shall constitute an original without the necessity of all parties signing the same page or the same documents, and may be executed by signatures to electronically or telephonically transmitted counterparts in lieu of original printed or photocopied documents. Signatures transmitted by facsimile shall be considered original signatures.

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

The Toledo Edison Company
(Company)

By: *John P. Langin*

Title: V.P. Of Energy Efficiency

Date: 1-11-13

TVI Inc. dba Savers_
(Customer)

By: *KATHY D. DUBOIS*

Title: *Controller*

Date: 1/6-12

Handwritten mark

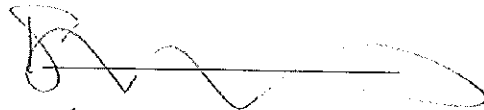
Affidavit of TVI Inc. dba Savers – Exhibit _A_

STATE OF OHIO)
) SS: 91-1255756
COUNTY OF Lucas)

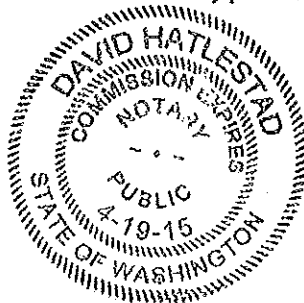
I, Kaylynn Daggett, being first duly sworn in accordance with law, deposes and states as follows:

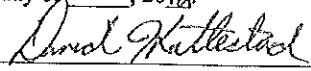
1. I am the Corporate Controller of TVI Inc. dba Savers ("Customer") As part of my duties, I oversee energy related matters for the Customer.
2. The Customer has agreed to commit certain energy efficiency projects to The Toledo Edison Company ("Company"), which are the subject of the agreement to which 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.


KAYLYNN DAGGETT

Sworn to before me and subscribed in my presence this 6th day of DECEMBER, 2012.




Notary

BW

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

6/5/2013 4:39:05 PM

in

Case No(s). 13-0107-EL-EEC

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