

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

Case No.: \_\_\_\_-EL-EEC

Mercantile Customer: West Chester Township

Electric Utility: **Duke Energy** 

Program Title or

**Library Lighting-Motors-Chiller** 

Description:

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: West Chester Township

Principal address: 9113 Cincinnati Dayton Rd West Chester, Ohio 45069

Address of facility for which this energy efficiency program applies:

9363 Centre Point Drive West Chester, Ohio 45069

Name and telephone number for responses to questions:

Grady Reid Jr, 513-287-1038

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. (Refer to Appendix A.)

## **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: **Duke Energy**
- 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	e 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)).
		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): <u>July 2009</u>
		Behavioral or operational improvement.

- B) Energy savings achieved/to be achieved by the energy efficiency program:
  - 1) If you checked the box indicating that the project involves the early replacement of fully functioning equipment replaced with new equipment, then calculate the annual savings [(kWh used by the original equipment) (kWh used by new equipment) = (kWh per year saved)]. Please attach your calculations and record the results below:

Annual savings: \_\_\_\_\_kWh

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

Annual savings: \_\_\_\_kWh

Please describe any less efficient new equipment that was rejected in favor of the more efficient new equipment.

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: **56,426 kWh (See Attachment 1 - Appendix 2)** 

Please describe the less efficient new equipment that was rejected in favor of the more efficient new equipment.

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?

New equipment was installed starting January 2009 and was finished July 2009

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

16.54 KW (See Attachment 1 - Appendix 2)

## 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 \$2365.62 (See Attachment 1 Appendix 3). (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.)
OI	R
	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 eff (choose which applies)	fective because it has a benefit/cost ratio greater than 1 using the :
	source Cost (TRC) Test. The calculated TRC value is:e to Subsection 1, then skip Subsection 2)
✓ Utility Co	ost Test (UCT). (See Attachment 1 - Appendix 4)
Subsection 1: TRC	Test Used (please fill in all blanks).
avoided sup distribution)	due of the program is calculated by dividing the value of our oply costs (generation capacity, energy, and any transmission or by the sum of our program overhead and installation costs and ental measure costs paid by either the customer or the electric
Th	ne electric utility's avoided supply costs were
Ot	ır program costs were
Th	ne 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 \$33,049 (See Attachment 1 - Appendix 5).

The utility's program costs were \$1,706(See Attachment 1 - Appendix 6).

The utility's incentive costs/rebate costs were \$2,365.62 (See Attachment 1 - Appendix 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.

### Refer to Offer Letter following this application

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.



DUKE ENERGY CORPORATION Mercantile Self Direct Program 139 East Fourth Street Cincinnati, OH 45202 513 629 5572 fax

June 13, 2012

Mr. Tim Franck West Chester Township 9113 Cincinnati Dayton Road West Chester, Ohio 45069

Subject: Your Application for a Duke Energy Mercantile Self-Direct Rebate

Dear Mr. Francke.

Thank you for your Duke Energy Mercantile Self Direct rebate application. As noted in the Energy Conservation Measure (ECM) chart on page two, a total rebate of \$2365.62 has been proposed for your lighting, chiller and motors project completed in the 2009 calendar year. All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).

At your earliest convenience, please indicate if you accept this rebate by

- providing your signature on page two
- · completing the PUCO-required affidavit on page three.

Please return the documents to my attention via fax at 513-629-5572 or e-mail to SelfDirect@Duke-Energy.com. Upon receipt, Duke Energy will submit the necessary documentation to PUCO. Following PUCO's approval, Duke Energy will remit payment.

At Duke Energy, we value your business and look forward to working with you on this and future energy efficiency projects. We hope you will consider our Smart \$aver® incentives, when applicable. Please contact me if you have any questions.

Sincerely,

CC:

Grady Reid, Jr Product Manager Mercantile Self Direct Rebates

> Tim Abbott, Duke Energy Rob Jung, WECC John Brofft, Innovative Energy Solutions

Please indicate your response t	o this rebate offer within 30	days of receipt.
Rebate is accepted.	Rebate is dec	clined.
	on the following pages into	s intention to commit and integrate the Duke Energy's peak demand reduction
	f this arrangement as requi	as joint applicant in any future filings red by PUCO and to comply with any as part of that approval.
pursuant to this rebate offer is to	rue and accurate. Informat nent specifications, equipm	information submitted to Duke Energy ion in question would include, but not be ent operational details, project costs, rvation measures installed.
If rebate is accepted, will you us reduction projects?	se the monies to fund future	e energy efficiency and/or demand
☐ YES ☐ NO		
If rebate is declined, please indi	cate reason (optional):	
gardill Boyler	JUAITH BOYKO	6-13-12
Customer Signature	Printed Name	Date

## **Proposed Rebate Amounts**

Measure ID	Energy Conservation Measure (ECM)	Proposed Rebate Amount
ECM-1	Occupancy Sensors <500 Watts (Qty 29)	\$290.00
ECM-2	Occupancy Sensors >500 Watts (Qty 3)	\$60.00
ECM-3	High Efficiency 10 HP Pump (Qty 4)	\$330.00
ECM-4	Motors 7.5 – 20 HP (Qty 4)	\$160.00
ECM-5	Air Screw Chiller COP=2.86, IPLV=3.48 (Qty 1)	\$1525.62
Total		\$2365.62



Case No.: \_\_\_-EL-EEC

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

State of OHIO:			
MATH BAVES			
JUDITH BOYKO, Af	fiant, being duly sworn a	according to law, deposes and	says
1. I am the duly authorize			
WEST CHES	TEN TOWNSHIP		
[insert customer or EDU o	company name and any applic	cable name(s) doing business as]	
application, including and inquiry of thos	any exhibits and attachn be persons immediately in the application, I be	ation contained in the fore ments. Based upon my exami y responsible for obtainin elieve that the information is	nation g the
		e imposed under Ohio Revise 3.03, and 4903.99 for submitt	
Tiddl C Borko	TOWNSHIP AD	MINISTRATOL	
Signature of Affiant & Title			
Sworn and subscribed before i	ne this <u>/3 <sup>1</sup></u> day of _	Jeine,	
2012 Month/Year		U	
/)	•)		
Yatrıcıa X. U.S. Signature of official administer	any	PATRICIN L. TIFFAN Print Name and Title	1/, ADM ASST
Signature of official administe	ring oath	Print Name and Title	9 NOTHEY
	MARIAL		
My commission expires on		PATRICIA L TIFFANY -NOTARY PUBLIC, STATE OF OHIO MY COMMISSION EXPIRES	1
<b>3</b>   P a g e	E OF OHIGH	JUNE 21, 2014	

## **Attachment 1 – West Chester Library**

## Appendix 1 – Electric History

66702109 04					
WESTCHESTER TOWNSHIP					
9577 BECKETT RD					
WEST CHESTER, OH 45069					
Read Date	Days	KWH Usage			
12/17/2009	31	144,900			
1/20/2010	34	180,900			
2/18/2010	29	164,953			
3/19/2010	29	148,184			
4/20/2010	32	145,776			
5/19/2010	29	130,402			
6/18/2010	30	151,308			
7/20/2010	32	168,796			
8/18/2010	29	156,777			
9/17/2010	30	148,395			
10/18/2010	31	139,824			
12/17/2010	31	153,851			
Total					

## Appendix 2 – Annual kWh losses and annual KW losses

Measure	Annual kWh Gross with losses	Upload Amount	TOTAL Annual kWh losses	KW Per Measure	Total KW Savings
Occupancy Sensor - <500 W	525.15	29	15229.35	0.11	3.19
Occupancy Sensor - >500 W	1313.35	3	3940.05	0.27	0.81
High Efficiency - Pump HE 10 HP	2525.91	4	10103.64	0.69	2.76
Motor - 7.5-20 hp	437.49	4	1749.96	0.12	0.48
Chiller - Air - Screw - COP=2.86 (kw/ton 1.23), IPLV=3.48 (kw/ton=1.01)	163.89	155	25402.95	0.06	9.3
Total			56425.95		16.54

## Appendix 3 – Cash Rebate

Measure	Amount
Occupancy Sensor - <500 W	\$290.00
Occupancy Sensor - >500 W	\$60.00
High Efficiency - Pump HE 10 HP	\$330.00
Motor - 7.5-20 hp	\$160.00
Chiller - Air - Screw - COP=2.86 (kw/ton 1.23),	
IPLV=3.48 (kw/ton=1.01)	\$1,525.62
Total	\$2,365.62

## Appendix 4 – Utility Cost Test

Measure	UCT
Occupancy Sensor - <500 W	10.21
Occupancy Sensor - >500 W	12.72
High Efficiency - Pump HE 10 HP	10.70
Motor - 7.5-20 hp	2.95
Chiller - Air - Screw - COP=2.86 (kw/ton 1.23),	
IPLV=3.48 (kw/ton=1.01)	7.6

## Appendix 5 – Avoided Supply Costs

Measure	T&D	Production	Capacity	Quantity	Total Avoided Costs
Occupancy Sensor - <500 W	\$17	\$117	\$39	29	\$5,017.00
Occupancy Sensor - >500 W	\$41	\$293	\$95	3	\$1,287.00
High Efficiency - Pump HE 10 HP	\$133	\$957	\$414	4	\$6,016.00
Motor - 7.5-20 hp	\$23	\$166	\$72	4	\$1,044.00
Chiller - Air - Screw - COP=2.86 (kw/ton 1.23), IPLV=3.48 (kw/ton=1.01)	\$14.00	\$70.00	\$43.00	155	\$19,685.00
Total					\$33,049.00

### Appendix 6 – Utility Program Costs

Measure	Qty	Admin Costs	Total Costs
Occupancy Sensor - <500 W	29	\$7	\$203
Occupancy Sensor - >500 W	3	\$14	\$42
High Efficiency - Pump HE 10 HP	4	\$58	\$232
Motor - 7.5-20 hp	4	\$36	\$144
Chiller - Air - Screw - COP=2.86 (kw/ton 1.23), IPLV=3.48 (kw/ton=1.01)	155	\$7.00	\$1,085
Total			\$1,706.00

## PRESCRIPTIVE LIGHTING

### **Ohio Mercantile Self Direct Program**

Application Guide & Cover Sheet

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.

Email this form along with completed Mercantile Self Direct Prescriptive or Custom applications, proof of payment, energy savings calculations and spec sheets to Self Direct@Duke-Energy.com. You may also fax to 1-513-419-5572.

Mercantile customers, defined as using at least 700,000 kWh annually are eligible for the Mercantile Soif Direct program. Please indicate mercantile qualification:

a single Duke Energy Ohio account

multiple accounts in Ohio (energy usage with other utilities may be counted toward the total)

Please list Duke Energy account numbers below (attach listing of multiple accounts an/or billing history for other utilities as required):

Account Number	Annual Usage	Account Number	Annual Usage	
2430-3699-01-1	723,400			

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart \$aver® Custom Incentive. Self Direct incentives are applicable to Prescriptive measures that were installed more than 90 days prior to submission to Duke Energy and have not previously received a Duke Energy Prescriptive rebate.

Self Direct Program requirements dictate that certain projects that may be Prescriptive in nature under the Smart \$aver program must be evaluated using the Custom process. Use the table on page two as a guide to determine which Self Direct program fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet. Where Mercantile Self Direct Prescriptive applications are listed, please refer to the measure list on that application. If your measure is not listed, you may be eligible for a Self Direct Custom rebate. Self Direct Custom applications, like Smart \$aver Custom applications, should include detailed analysis of pre-project and post-project energy usage and project costs. Please indicate which type of rebate applications are included in the table provided on page two.

Please check each box to indicate completion of the following program requirements:											
All sections of appropriate application(s) are completed	Proof of payment.*	☑ Manufacturer's Spec sheets	Energy model/calculations and detailed inputs for Custom								
		<u> </u>	applications								

<sup>\*</sup> If a single payment record is intended to demonstrate the costs of both Prescriptive & Custom projects, please include an additional document with an estimated breakout of costs for each Prescriptive and Custom energy conservation measure.

Application Type	Replaced equipment at end of lifetime or because equipment failed**	Replaced fully operational equipment to improve efficiency***	New Construction
	MSD Custom Part 1	MSD Prescriptive Lighting	MSD Prescriptive Lighting 🛛
Lighting	Custom Lighting Worksheet	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐
Heating & Cooling	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Heating & Cooling
	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1  MSD Custom General Worksheet
Window Films, Programmable Thermostats, & Guest Room Energy Management Systems	MSD Custom Part 1  MSD Custom General and/or EMS Worksheet(s)	MSD Prescriptive Heating & Cooling	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐
Chillers & Thermal	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Chillers & Thermal Storage □
Storage	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups
Motors & Pumps	MSD Custom Part 1	MSD Custom Part 1 🔲	MSD Prescriptive Motors, Pumps & Drives □
niotoro a i amps	MSD Custom General Worksheet []	MSD Custom General Worksheet	MSD Custom Part 1  MSD Custom General Worksheet
VFDs	Not Applicable	MSD Prescriptive Motors, Pumps & Drives □	MSD Custom Part 1
VPDS	мог дррисане	MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐	MSD Custom VFD Workshect
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Food Service
Food Service	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1  MSD Custom General Worksheet
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Process
Air Compressors	MSD Custom Compressed Air Worksheet	MSD Custom Compressed Air Worksheet	MSD Custom Part 1 ☐ MSD Custom Compressed Air Worksheet ☐
	MSD Custom Part 1	MSD Prescriptive Process	MSD Custom Part 1 □
Process	MSD Custom General Worksheet		
Energy Management Systems	MSD Custom Part 1   MSD Custom EMS Worksheet	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐
Behavioral*** & No/Low Cost		MSD Custom Part 1  MSD Custom General Worksheet	

\*\*\* Please ensure that you include the age of the replaced equipment for measures classified as "Early Replacement" in your application as well as the estimated date that you would have otherwise replaced the existing equipment if you had not chosen a more energy efficient onton

energy efficient option.

\*\*\*\* Behavioral energy efficiency and demand reduction projects must be both measurable and verifiable. Provide justification with your application.

Rev 1//11

<sup>\*\*</sup> Under the Self Direct program, failed equipment and equipment at the end of its useful life are evaluated differently than early replacement of fully functioning equipment. All equipment replacements due to failure or old age will be evaluated via the Custom program.



## **MERCANTILE SELF DIRECT** Ohio Lighting Incentive Application

Questions? Call 1-866-380-9580 or visit <a href="https://www.duke-energy.com">www.duke-energy.com</a>. Email the complete, signed application with all required documents to <a href="https://self.duke-energy.com">Self.Direct@duke-energy.com</a> or fax to 513-419-5572.

Is this a	application:		NEW (original) or	REVISED	(change	s made to	original ap	plication)		
Building Type - Required	(check one	)							10.8	
☐ Data Centers			☐ Full Service Resta	urant			□ om	ce		
☐ Education/K-12			☐ Healthcare				⊠ Pub	lic Assembly		
☐ Education Other			☐ Industrial				☐ Public Order/Safety			
☐ Elder Care/Nursing Hon	ne		Lodging				Reli	gious Worship/Chu	ırch	
☐ Food Sales/Grocery			Retail (Small Box	)			☐ Service			
☐ Fast Food Restaurant			Retail (Big Box)				Warehouse			
Other:			- Jan-1							
How did you hear about th	ie program	? (check	(one)		******					
Duke Energy Representa			☐ Web Site				Rad	io		
Contractor / Vendor			Other							
Please check each box to inc					15 1	-		<b>I</b>	1 10	
All sections of application	n	nui	oice with make, model mber, quantity and equipme nufacturer		☐ Tax ID number for payee			☐ Customer/ve and Condition	endor agree to Terms ons	
Customer Information		030						*****		
Customer/Business		West C	hester Township	Contac	1		Tim Franck		The second second	
Phone		513-579			nt Num	mber		2430-3699-01-	1	
Street Address (Where incer	tive should			1000		ti Dayton	Road	Terres Street inc.		
	nive should	West C		State	THE THINK	Oh	reona	Zip Code	45069	
City Installation Street Address		11111	entre Point Drive	State		lon.		isip code	1000	
7				State		Oh		Zip Code	45069	
City		West C		State		JOII		Zip Code	43007	
E-mail Address *Failure to provide the account			@westchesteroh.org	allation took	nlago wi	Il cocult in	raiaction of	the application		
*Failure to provide the account Vendor Information	t number ass	octatea w	un ine tocanon where the insi	unanon took	place wi	n resum m	rejection of	те аррисанот.	F	
Vendor		Innova	tive Energy Solutions	Contac				John Brofft		
		513-874		Fax				513-874-8911		
Phone				I ax				10.00.1.02.12		
Street Address		Hamilto	mmes Road	State		ОН		Zip Code	45015	
City				State		On		Elp code		
E-mail Address			offt@ies-cin.com	to at 9		MC	ustomer	☐ Vendo	,	
If Duke Energy has question	ons about th	us appli	cation, who should we con	itact;	-		astomer		- 1 / V - 11 / 1 - 1	
Payment Information			[N Cuutaman	4-1-1-1		TT Venu	for (Custon	ner must sign belov	v)	
Who should receive incentive			Customer Circumstant Custom	on alamatura	,	- Vene	ioi (Custoi	ner mast sign belev	<u> </u>	
I hereby authorize payment of the vendor:	of incentive	directly	The state of the s	cii signature		N/A				
PARTICULAR PROPERTY.		- 0.0				_	106			
Provide Tax ID Number for	Payee		Customer Tax ID #			31-6010	100			
			Vendor Tax ID #			N/A				
Terms and Conditions				3.						
I have read and hereby agree	to the Tern	ns & Cor	nditions and Program Requi	rements.						
Customer Signature	Madel	1/8	ya 1.30-12	Vendor S	Signatur	e				
Date	1/9/12	1	0	Date						
Titla				Title						

Incentives are subject to change and may be discontinued at the sole discretion of Duke Energy. Equipment must be installed and operable to be eligible for incentives. As Federal Energy Policy Law changes, equipment efficiency requirements are subject to change.



NOTE: All Fixtures must be installed indoors, with the exception of Traffic and Pedestrian Signals and where otherwise noted,

NOTE: All Fixtures must be installed indoors  Fixtures = Lamps + Ballast Retrofit fixture replacement = 1:1 ratio (except where otherwise indicated)	Ballast and Model Numbers	Incentive per fixture		Annual Operating Hours (minimum of 1800)	Equipment Cost (w/o labor)	Date Installed and	Total Incentive
T-12 fixtures replaced by T8 (T8 U tube lamps are e	I ligible for incentives based on the total r	neasured leng	th of the	lamp.)			
T8 80 2 lamp replacing T12 80 2 lamp (retrofit only)	Ballast model# Lamp model #	\$3.50		Hrs.			
T8 8ft 1 lamp replacing T12 8ft 1 lamp (retrofit only)	Ballast model# Lamp model #	\$2.50		Hrs.			
T8 4ft 4 lamp replacing T12 4ft 4 lamp (retrofit only)	Ballast model# Lamp model #	\$5,50		Hrs.			
T8 4ft 3 lamp replacing T12 4ft 3 lamp (retrofit only)	Ballast model#  Lamp model #	\$4.50		Hrs.			
T8 4ft 2 lamp replacing T12 4ft 2 lamp (retrofit only)	Ballast model#	\$2.00		Hrs.			
T8 4ft 1 lamp replacing T12 4ft 1 lamp (retrofit only)	Ballast model# Lamp model #	\$1.50		I Irs.			
T8 3ft 4 lamp replacing T12 3ft 4 lamp (retrofit only)	Ballast model#	\$5.00		Hrs.			
T8 30 3 lamp replacing T12 30 3 lamp (retrofit only)	Ballast model#	\$3,25		Hrs.			
T8 3A 2 lamp replacing T12 3A 2 lamp (retrofit only)	Ballast model#	\$2.00		Hrs.			
T8 3ft 1 lamp replacing T12 3ft 1 lamp (retrofit only)	Ballast model#	\$1.50		Hrs.			
T8 2ft 4 lamp replacing T12 2ft 4 lamp (retrofit only)	Ballast model#	\$3.00		Hrs.			
T8 20 3 lamp replacing T12 20 3 lamp (retrofit only)	Ballast model# Lamp model #	\$2.10		Hrs.			
T8 2A 2 lamp replacing T12 2A 2 lamp (retrofit only)	Ballast model#  Lamp model #	\$2.00		Hrs.			
T8 2ft 1 lamp replacing T12 2ft 1 lamp (retrofit only)	Ballast model# Lamp model #	\$1.50		Hrs.			

- Replacement must result in energy savings to quality.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- All fluorescent fixtures shall utilize electronic ballast and T-8 lamps.
- Ballasts shall have a power factor greater than 90%.
- Ballasts, harmonic distortion shall not exceed 20%. For 8-foot fluorescent ballasts, the total harmonic distortion shall not exceed 30%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors (heated and cooled enclosed space).
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- High lumen lamp and low ballast factor ballast combinations are expected.
- Eligible T8 High Bays must have specular/mirror like or white reflectors and fixture efficiency must be >90%.
- Manufacturers spec sheet is required and must indicate that it is a High Bay fixture and the fixture efficiency is > than 90%. If spec sheet does not list efficiency, a photometric report will be required that indicates total fixture (Luminaire) efficiency rating or the 0-180 degree of lamp rating included in the zonal lumen summary chart.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



NOTE: All Fixtures must be installed indoors, with the exception of Traffic and Pedestrian Signals and where otherwise noted.

Fixtures = Lamps + Ballast Retrofit fixture replacement - 1:1 ratio (except where otherwise indicated)	Ballast and Model Numbers	Incentive per fixture	Qty	Annual Operating Hours (minimum of 1800)	(w/o labor)	Installed and	Total Incentive
1-12 fixtures replaced by T8 (T8 U tube lamps are e	ligible for incentives based on the total m	casured leng	th of the l	lamp.)			
T8 HO 8ft 1 lamp replacing T12 HO 8ft 1 lamp (retrofit only)	Baffast model# Lamp model #	\$5.00		Hrs.			
T8 HO 8ft 2 lamp replacing T12 HO 8ft 2 lamp (retrolit only)	Ballast model#  Lamp model #	\$7.00		Hrs.			
T8 HB 4ft 3L replacing 150-249W HID(retrofit only )	Ballast model#  Lamp model #	\$15.00		Hrs.			
T8 HB 4ft 4L a replacing 250-399W HID(retrofit only )	Ballast model# Lamp model #	\$20.00		Hrs.			
T8 HB 4ft 6L replacing 400-999W HID (retrolit only)	Ballast model#  Lamp model #	\$25.00		Hrs.	:		
T8 HB 4ft 8L replacing a 400-999W HID(retrofit only )	Ballast model#  Lamp model #	\$20.00		Hrs.			
2 fixtures – T8 HB 4ft 8 Lamp (32W) replacing 1,000 W HID (2 for 1 replacement (retrofit only)	Ballast model# Lamp model #	\$60.00		Hrs.			

- Replacement must result in energy savings to qualify.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- · All fluorescent fixtures shall utilize electronic ballast and T-8 lamps.
- · Ballasts shall have a power factor greater than 90%.
- Ballasts, harmonic distortion shall not exceed 20%. For 8-foot fluorescent ballasts, the total harmonic distortion shall not exceed 30%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors (heated and cooled enclosed space).
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- High lumen lamp and low ballast factor ballast combinations are expected.
- Eligible T8 High Bays must have specular/mirror like or white reflectors and fixture efficiency must be >90%.
- Manufacturers spec sheet is required and must indicate that it is e High Bay fixture and the fixture efficiency is > than 90%. If spec sheet does not list
  efficiency, a photometric report will be required that indicates total fixture (Luminaire) efficiency rating or the 0-180 degree of lamp rating included in
  the zonal lumen summary chart.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



Fixtures = Lamps + Ballast Fixtures nust be permanently retrofitted to the tamp count specified. Reflectors may be utilized to maintain necessary lighting levels.	Ballast and Model Numbers	Incentive per fixture	Qiy	Annual Operating Hours (minimum of 1800)	Equipment Cost (w/o labor)	Installed and	Total Incentive
T-12 fixtures replaced by T8 with delamping							
T8 8ft 1 lamp replacing T12 8 ft 2 lamp (retrofit only)*	Ballast model#	\$5.00					
	Lamp model #			Hrs.			
T8 4ft 2 lamp replacing T12 4ft 3 lamp (retrofit only)*	Ballast model# Lamp model #	\$2.50		Hrs.			
T8 4ft 1 lamp replacing T12 4ft 2 lamp (retrofit only)*	Ballast model#	\$2.50		Hrs.			
T8 3ft 3 lamp replacing T12 3ft 4 lamp (retrofit only)*	Ballast model# Lamp model #	\$2.00		Hrs.			
T8 3ft 2 lamp replacing T12 3ft 3 lamp (retrofit only)*	Batlast model#	\$2.00		Hrs.			
T8 3ft 1 lamp replacing T12 3 ft 2 lamp (retrofit only)*	Ballast model# Lamp model #	\$2.00		Hrs.			
T8 2ft 3 lamp replacing T12 2 ft 4 lamp (retrofit only)*	Ballast model# Lamp model #	\$1.50		Hrs.			
T8 2ft 2 lump replacing T12 2 ft 3 lamp (refrofit only)*	Ballast model# Lamp model #	\$1.50		Hrs.			
T8 2ft 1 lamp replacing T12 2ft 2 lamp (retrofit only)*	Ballast model# Lamp model #	\$1.50		Hrs.			

- Replacement must result in energy savings to qualify.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- All fluorescent fixtures shall utilize electronic ballast and T-8 lamps .
- Ballasts shall have a power factor greater than 90%.
  Ballasts, harmonic distortion shall not exceed 20%. For 8-foot fluorescent ballasts, the total harmonic distortion shall not exceed 30%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors.
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



Fixtures = Lamps + Ballast Retrofit fixture replacement - 1:1 ratio (except where otherwise indicated)	Ballast and Model Numbers	Incentive per fixture	Qty	Annual Operating Hours (minimum of 1800)	Equipment Cost (w/o labor)	Date Installed and Operable (mm/yy)	Total Incentive
T12 8ft and 4ft fixture replaced by T8 High Per Replace T12 and T12 HO 8' fixtures with High Per qualified product list found on the web at www.ccc	formance T8 4ft lamps and ballast. Approv	ved lamps and l	allasts n	nist be listed or	ı the CEE Hig	lı performar	ice '1'8
High Performance T8 4R 2 lamp fixture replacing T12 8R 1 lamp fixture	Ballast model# Lamp model #	\$5.00		Hrs.			
High Performance T8 4ft 4 lamp fixture replacing T12 8ft 2 lamp fixture	Ballast model# Lamp model #	\$5,00		Hrs.			
High Performance T8 4ft 2 Ismp fixture replacing T12 High Output 8ft 1 Ismp fixture	Ballast model# Lamp model #	\$10.00		Hrs.			
High Performance T8 4ft 4 lamp fixture replacing T12 High Output 8ft 2 lamp fixture	Ballast model# Lamp model #	\$12.50		Hrs.			
High Performance T8 4ft I lamp fixture replacing T12 4ft I lamp	Ballast model# Lamp model#	\$3.00		Hrs.			
High Performance T8 4ft 2 lamp fixture replacing T12 4ft 2 lamp	Ballast model# Lamp model#	\$4.00		Hrs.			
High Performance T8 4ft 3 lamp fixture replacing T12 4 ft 3 lamp	Ballast model# Lamp model #	\$6.00		Hrs.			
High Performance T8 4ft 4 lamp fixture replacing T12 4 ft 4 lamp	Ballast model# Lamp model #	\$8.00		Hrs.			
T-12 4ft fixture replaced by Reduced Waltage T Replace standard T12 systems with 4'25W lamps, waltage approved list. To view the CEE Reduced V manufacturer's literature before specifying product	28W lamps, and approved CEE ballast. In Vattage T8 qualified product list, go to ww	order to qualify w.cecl.org. No	for ince te: Redu	ntives, bulbs a ced Wait 18 co	id ballasts mu mpatibility va	st be from C rics; consul	EE reduced-
Reduced Wattage T8 40 1 lamp of 28W or less & ballast replacing standard T12 40 1 lamp 34 W		\$4.00		llrs.			
Reduced Wattage T8 4ft 2 lamp of 28 W or less & ballast replacing standard T12 4 ft 2 lamp – 34 W	Ballast model# Lamp model #	\$5.00		Hrs.			
Reduced Wattage T8 4ft 3 lamp of 28 W or less & ballast replacing standard T12 4 ft 3 lamp = 34 W	Ballast model# Lamp model #	\$7.00		Hrs.			
Reduced Wattage T8 4R 4 lamp of 28 W or less & ballast replacing standard T12 4 R 4 lamp – 34 W	Ballast model# Lamp model #	\$9.00		Hrs.			

- Replacement must result in energy savings to quality.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of  $\overline{1,800}$  hours to be eligible.
- All fluorescent fixtures shall utilize electronic ballast and T-8 lamps.
- Ballasts shall have a power factor greater than 90%.
- Ballasts, harmonic distortion shall not exceed 20%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors except where specifically stated.
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- Replacement must result in energy savings to qualify.
- High lumen lamp and low ballast factor ballast combinations are expected.
- Normal or low ballast factor ballasts must be utilized to be eligible.
- Reduced watt T8 lamps should not be used in dimning applications unless the lamp and ballast manufacturers have approved a specific application for dimning or frequent switching. May demonstrate dim light, spiraling, pulsing and other undesirable behavior in cooler temperature rooms and while warming up. System performance varies based on lamp or ballast components.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



Fixtures = Lamps + Ballast Retrolit fixture replacement - 1:1 ratio (except where otherwise indicated)	Ballast and Model Numbers	Incentive per fixture	Qiy	Annual Operating Hours (minimum of 1800)	Equipment Cost (w/o labor)	Date Installed and Operable (num/yy)	Total Incentive
T-12 fixtures replaced with T5 Electronic Balla	its					3333	516.00.00
T5 4ft (28 watt) 1 lamp replacing T12 4ft 1 lamp (retrolit only)	Ballast model# Lamp model #	\$2.50		Hrs.			
T5 4ft (28 watt) 2 lamp replacing T12 4ft 2 lamp (retrofit only)	Ballast model# Lamp model #	\$4.00		Hrs.			
T5 4ft (28 watt) 3 lamp replacing T12 4ft 3 lamp (retrofit only)	Ballast model#	\$5.00		Hrs.			
T5 4ft (28 watt) 4 lamp replacing T12 4ft 4 lamp (retrofit only)	Ballast model# Lamp model #	\$6.00		Hrs.			
T5 HO 4ft 1 (54 watt) lamp replacing 34W T12 4ft 2 lamp (retrofit only)	Ballast model# Lamp model #	\$3,00		Hrs.			
T5 HO 4ft 2 (54 watt) lamp replacing 34W T12 4ft 4 lamp (retrofit only)	Ballast model# Lamp model #	\$4.50		Hrs.			
T5 HO 4ft 2 (54 watt) lamp replacing 60W T12 8 ft 2 lamp (retrofit only)	Ballast model# Lamp model #	\$4.50		Hrs.			
T5 HO 4ft 3 (54 watt) lamp replacing 95W T12 HO 8ft 2 lamp (retrofit only)	Ballast model# Lamp model #	\$5.50		Hrs.			
T5 HO 4ft 4 (54 watt) lamp replacing 60W T12 8ft 4 lamp (retrofit only)	Ballast model# Lamp model #	\$6.50		Hrs.			
T5 HO 4ft 4 (54 watt) lamp replacing 95W T12 VHO 8ft 2 lamp (retrofit only)	Ballast model# Lamp model #	\$6.50		Hrs.			
T5 HO HB 21. replacing 150-249W HID (retrofit only) Fixture efficiency	Ballast model# Lamp model #	\$15.00		Hrs.			
T5 HO HB 31, replacing 250-399W HID(retrofit only) Fixture efficiency	Ballast model# Lamp model #	\$20,00		Hrs.			
T5 HO HB 4L replacing 400-999W HID(retrofit only) Fixture efficiency	Ballast model# Lamp model #	\$25.00		Hrs.	i i		
	Ballast model# Lamp model #	\$20.00		Hrs.			
TS HO HB 81. replacing 750-999W HID (retrofit only) Fixture efficiency	Ballast model# Lamp model #	\$37.50		Hrs.			
	Baliast model# Lamp model #	\$60.00		Hrs.			

- Replacement must result in energy savings to qualify.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- All fluorescent fixtures shall utilize electronic ballast and T-5 lamps.
- Ballasts shall have a power factor greater than 90%.
- Ballasts, harmonic distortion shall not exceed 20%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- Replacement must result in energy savings to qualify.
- Eligible T5 High Bays must have specular/mirror like or white reflectors and fixture efficiency must be >90%. Manufacturers spec sheet is required and must indicate that it is a High Bay fixture and the fixture efficiency is > than 90%. If spec sheet does not list efficiency, a photometric report will be required that indicates total fixture (Luminaire) efficiency rating or the 0-180 degree of lamp rating included in the zonal lumen summary chart.
- Incentive capped at 50% of the equipment cost.



New construction or replacement of failed equipment must apply for Self Direct Custom program.

Fixtures = Lamps + Ballast Retrofit fixture replacement – 1:1 ratio (except where otherwise indicated)	Ballast and Model Numbers	Incentive per fixture	Qiy	Annual Operating Hours (minimum of 1800)	Equipment Cost (w/o labor)	Date Installed and Operable (mn/yy)	Total Incentive
T-8 Fixtures replaced by High Performance T8 Replace standard T8 systems with High Performan product list found on the web at www.ccel.org.		mps and ballast	s must be l	listed on the CI	E High perfo		qualified
T8 40 High Performance 1 lamp & ballast replacing standard T8 40 1 lamp fixture	Ballast model#  Lamp model #	\$2.00		Hrs.	t 		
T8 4ft High Performance 2 lamp & ballast replacing standard T8 4ft 2 lamp fixture	Ballast model#  Lamp model #	\$3.00		Hrs.			
T8 4ft High Performance 3 lamp & ballast replacing standard T8 4ft 3 lamp fixture	Ballast model# Lamp model #	\$3.10		Hrs.			
F8 40 High Performance 4 lamp & ballast replacing standard T8 40 4 lamp fixture	Ballast model# Lamp model #	\$6.00		l frs.			
T-8 Fixtures replaced by Reduced Wattage Hig Replace standard T8 systems with 4' 25W lamps, 2 to qualify for incentives bulbs and ballasts must be www.ceel.org. Note: reduced wattage T8 compat	8W lamps approved CEE ballast OR rela from CEE reduced-wattage approved list	. To view the C	EE Reduc	ed Wattage T8			
Reduced Wattage T8 4ft 1 lamp of 28W or less & ballast replacing standard T8 4ft 1 lamp – 32W	Ballast model# Lamp model #	\$2.00		Hrs.			
Reduced Wattage T8 4ft 2 lamp of 28W or less & pallast replacing standard T8 4ft 2 lamp - 32W	Ballast model# Lamp model #	\$3.00		Hrs.			
Reduced Wattage T8 4ft 3 lamp of 28W or less & oallast replacing standard T8 4ft 3 lamp – 32W	Ballast model# Lamp model #	\$5.00		Hrs.			
Reduced Wattage T8 4ft 4 lamp of 28W or less & pallast replacing standard T8 4ft 4 lamp – 32W	Ballast model# Lamp model #	\$6.00		Hrs.			
Relump T8 4ft 32W fixtures with Reduced Wattage T8 lamps 28 watts or less	Ballast model#	S.25 / lamp		Hrs.			

- Replacement must result in energy savings to qualify.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- All fluorescent fixtures shall utilize electronic ballast and T-8 lamps
- Ballasts shall have a power factor greater than 90%.
- Ballasts, harmonic distortion shall not exceed 20%.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors except where specifically stated.
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- Replacement must result in energy savings to qualify.
- High lumen lamp and low ballast factor ballast combinations are expected.
- Reduced watt T8 lamps should not be used in dimming applications unless the lamp and ballast manufacturers have approved a specific application for dimming or
  frequent switching. May demonstrate dim light, spiraling, pulsing and other undesirable behavior in cooler temperature rooms and while warming up. System
  performance varies hased on lamp or ballast components.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



GVL Lamps and Fixtures	Incentive	Oiy San San San San San San San San San San	Annual Operating Hours (numinal of 1800)	Cost	Date Installed and Operable (mm/yy)	Total Incentive
42W 8 lamp HB CFL replacing 400W HID (retrofit only)  Model Number	\$25.00		Hrs.			·
CFL - Screw In (lamp only) replacing an incandescent (retrofit only) Model Number	\$0.75 / lamp		Hrs.			
CFL – Screw-In dimmable or 3-way bulb replacing an incandescent dimmable or 3-way bulb (retrofit only)  Model Number	\$1.00 / lamp		Hrs.			
CFL – Hardwired Fixture replacing incandescent fixture (only pin based CFL's qualify) Model Number	\$5.00 / fixture		Hrs.			
Up to 30W CFL Flood Lamp with Reflector replacing 100W or less incandescent (retrofit only) Model Number	\$1.50 / lamp		Hrs.			
33W - 115W CFL lamp replacing 100 W or more incandescent Model Number	\$2.50 / lamp		Hrs.			
Energy Star LED Lamps					10 0 0 0 3 5 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Replace incandescent bulbs with Energy Star LED (retrofit only)  LED lamps must be listed on the Energy Star Qualified Light Bulbs list to qualify.  http://www.energystar.gov/index.cfm?fuseaction=iledt.display_product s_pdf  Model Number	\$5,00 / lamp		Hrs.			
Replace 60-100W incandescent with ENERGY STAR qualified LED downlight 18 Watts or less. (retrofit only) Product must appear on ENERGY STAR Qualified LED Lighting qualified products list, and must contain the word "downlight". http://www.energystar.gov.index.cfm?fuseaction=ssl.display_products_con_pxl.  Model Number	\$7.50 / fixture		Hrs.		77 77 12 12 12 12 12 12 12 12 12 12 12 12 12	

- Replacement must result in energy savings to qualify.

  All equipment must be new to be eligible for incentives. Used equipment is *not* eligible for incentives.

  Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.

  All fixtures shall be installed indoors except where specifically stated.

  All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.

- All fixtures must operate a minimum of 1,800 hours to be eligible.



Metal Halide				
320W Pulse Start Halide replacing 400W HID (retrofit only) **check one □R □FE Model Number	\$12.50	Hrs.	!	
Ceramic Metal Halide				
20W Ceramic Metal Halide fixture replacing Incandescent or Halogen of at least 100 W Model Number	\$15.00	Hrs.		
39W Ceramic Metal Halide fixture replacing ☐ Incandescent or ☐ Halogen of at least 150 W Model Number	\$15.00	Hrs.		
50W Ceramic Metal Halide fixture replacing ☐ Incandescents or ☐ Halogen for a total of 195W Model Number	\$15.00	Hrs.		
70W Ceramic Metal Halide fixture replacing ☐ Incandescents or ☐ Halogen for a total of 225W Model Number	\$15.00	Hrs.		
100W Ceramic Metal Halide fixture replacing ☐ Incandescents or ☐ Halogens for a total of 270W Model Number	\$15.00	Hrs.		
150W Ceramic Metal Holide fixture replacing ☐ Incandescents or ☐ Halogens for a total of 360W Model Number	\$15.00	Hrs.		
25 W or less Ceramic Metal Halide with integral ballast replacing 70 W or greater incandescent flood light Model Number	\$5.00/lamp	Hrs.		

- Replacement must result in energy savings to qualify.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors except where specifically stated.
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- Incentives for pulse start metal halide fixtures are for 320w pulse start metal halide lamp/ballast combinations. In a retrofit application, the
  fixture must be hard-wired ballast retrofit or new fixture. Screw in retrofit lamps do not qualify. Pulse start lamp wattage must be lower than
  existing probe start lamp wattage.
- Ceramic Metal Halide Incentive is for complete hardwired fixtures containing ceramic metal halide lamp and electronic ceramic metal halide ballast.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



Myasure	Incentive	Qty	Annual Operating Hrs (minimum of 1800)	Equipment cost (w/o labor)	Date Installed and Operable (mnv/yy)	Total Incentive
21" Tubular Skylight/Light Tube (at least one light fixture per light tube must be controlled by a "daylight" sensor (no additional daylight sensor incentive applies) Check One **   R   NC   FE  Model Number	\$37.50 / fixture					
LED Exit Signs (replacing or retrofitting existing incandescent or compact fluorescent exit sign) Check one □R □NC □FE Model Number	\$5.00 / fixture					
LED Lighting In Reach-in Freezer or Cooler Case (replacing fluorescent fixtures) Model Number	\$25.00 / door					
LED Case Lighting Sensor Controls Check one □R □NC □FE Model Number Model Number	5.00 / sensor	V				
Under 500 W connected to sensor check one □R ☑NC □FE Model Number Hubbell lighthawk Series	\$10,00 / sensor	29	3570	\$1,595.00	07/09	\$290.00
Over 500 W connected to sensor check one □R ⊠NC □FE Model Number Hubbell Omni DT Series	\$20.00 / sensor	3	3570	\$1,100.00	07/09	\$60.00

- Replacement must result in energy savings to qualify
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.
- Lighting circuits should be installed with a neutral wire that has the same size conductor as the line load.
- All fixtures shall be installed indoors except where specifically stated.
- All fixtures, lamps and ballasts must be UL certified and meet all applicable codes and regulations.
- All fixtures must operate a minimum of 1,800 hours to be eligible.
- Tubular Skylight requires at least one light fixture per light tube that must be controlled by a "daylight" sensor (no additional daylight sensor incentive applies)
- LED exit signs shall use 5 watts or less including the battery charger when active. They must meet State Fire Marshal codes and be UL rated.
- Occupancy Sensors (under and over 500) must be either wall, ceiling, or fixture mounted. Rapid or programmed start ballasts are recommended for fluorescent
- Occupancy Sensors (under 500W) installed on or built into High Bay fixtures are eligible for incentives.
- LED Lighting in Reach-in Freezer or Cooler Case: Must install a LED lighting system and replace (or in lieu of) a fluorescent lighting system for reachin refrigerated display case.
- Fluorescent magnetic ballasts cannot be used to power the LED case lighting system. Existing fluorescent fixture end connectors and ballasts must be removed.
- LED case lighting system must be a permanently installed luminaire. LED lamps that install into fluorescent lamp sockets are not eligible for
- LED Case Lighting Sensor Controls may only be installed with LED lighting systems. End of aisle and individual case sensors qualify.
- Incentive capped at 50% of the equipment cost.
- New construction or replacement of failed equipment must apply for Self Direct Custom program.



Öntdörr Ughting	Incentive	Oty	Annual Operating Hrs (minimum of 1800)	Equipment cost (w/o labor)	Date Installed and Operable (mm/yy)	Total Incentive
Exterior LED or Induction fixture replacing up to 175W HID Model Number	\$20 / fixture					
Exterior LED or Induction fixture replacing 176W - 250W HII) Model Number	\$25 / fixture					
Exterior LED or Induction fixture replacing 251W - 400W HID Model Number	\$40 / fixture					
Exterior LED or Induction fixture replacing > 400 W HID Model Number	\$75/ fixture					
Garage LED or Induction fixture replacing up to 175 W HID Model Number	\$50/ fixture					
Garage LED or Induction fixture replacing 176W – 250W HID Model Number	\$75/ fixture	V/A/-				
Garage LED or Induction fixture replacing 251W - 400 W HID Model Number	\$125/ fixture					
Garage LED or Induction fixture replacing > 400 W HID  Model Number	\$200/ fixture	-				
.ED Auto Traffic Signals (replacing incandescent) Model Number	\$6.25 / lamp					
ED Pedestrian Signals (replacing incandescent) Model Number	\$12.50/ signal					

equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.

r and garage LED and induction lighting must result in a total power reduction of 40% or more.

r and garage LEDs should be listed on either the Energy Star or Design Lights consortium qualifying products lists:

http://www.energystar.gov/index.cfm?fuseaction=ssl.display\_products\_com\_pdf

http://www.designlights.org/documents/NEEPDLCQPL.xls

and pedestrian signals using LED lights must replace conventional incandescent signals.

ve capped at 50% of the equipment cost.

construction or replacement of failed equipment must apply for Seif Direct Custom program.

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### Program Requirements

#### Incentive Eligibility

- Incentives are only available to customers on a Duke Energy Ohio non-residential rate.
- Duke Energy Customers who purchase electric generation from an alternative supplier are eligible to participate.
- Incentive will not be paid until eligible equipment has been installed, is available to operate, and verification has been completed by Duke Energy staff as noted in the Term & Conditions stated below.
- Duke Energy reserves the right to revise incentive levels and/or qualifying efficiency levels at any time.
- Customer may assign the incentive to the vendor who installed/supplied the equipment. The customer's signature is required in the Payment Information section on page 1 of this form to assign the incentive to the vendor. Customer agrees that such an action constitutes an irrevocable assignment of the incentive. This assigned incentive must reduce the purchase price paid for the equipment by an equivalent amount.
- Leased equipment is eligible for incentives providing the equipment meets the program requirements and the customer provides the required documentation noted on the incentive Application Process page of this application.
- Any equipment which, either separately or as part of a project, has or will receive an incentive from any other Duke Energy program is ineligible.
- In no case will Duke Energy pay an incentive above the actual cost of the new equipment.
- Incentive recipient assumes all responsibilities for any tax consequences resulting from Duke Energy incentive payment.
- To qualify for Duke Energy incentives, applicants who provide their social security number as their federal tax identification number for tax purposes must sign and return the "Customer consent to release personal information" form ("Consent Form") along with the application. Incentive applications are processed by a 3<sup>rd</sup> party vendor. The 3<sup>rd</sup> party vendor is responsible for mailing the 1099 form at the end of the calendar year for tax filing. Duke Energy and the 3rd party vendor have signed a confidentiality agreement to protect your personal information. If your social security number is your federal tax ID number and you elect not to sign the Consent Form, please do not send Duke Energy the application, as you will not be qualified to participate in the incentive program.



#### **Terms and Conditions**

I certify that this premise is served by Duke Energy (or an affiliate of Duke Energy), that the information provided herein is accurate and complete, and that I have purchased and installed the high efficiency equipment (indicated herein) for the business facility listed herein and not for resale. Attached is an itemized invoice for the indicated installed equipment. In understand that the proposed incentive payment from Duke Energy is subject to change based on verification and Duke Energy approval. I agree to Duke Energy verification of both the sales transaction and equipment installation which may include a site inspection from a Duke Energy representative or Duke Energy agent. I understand that I am not allowed to receive more than one incentive from Duke Energy on any piece of equipment. I also understand that my participation in the program may be taxable and that my company is solely responsible for paying all such taxes. I hereby agree to indemnify, hold harmless and release Duke Energy and it's affiliates from any actions or claims in regards to the installation, operation and disposal of equipment (and related materials) covered herein including liability from an incidental or consequential damages. Duke Energy does not endorse any particular manufacturer, product or system design within these programs; does not expressly or implicitly warrant the performance of installed equipment (Contact your contractor for details regarding equipment warranties) and is not liable for any damage caused by the installation of the equipment nor for any damage caused by the malfunction of the installed equipment.



### **Incentive Application Instructions**

#### IMPORTANT NOTICE

Delays in processing incentive payments will occur if required documentation is not included with completed application(s).

- Contact Duke Energy toll free at 866-380-9580 to confirm customer eligibility. Applications are available for download at www.duke-energy.com.
- Review program and equipment requirements on the incentive application. (Page 7) 2.
- 3. Purchase and install eligible energy-efficient equipment.
- Complete and submit application for equipment that was installed after 1/1/2008. 4.
- The following items must be included to verify projects. If they are not included, it will delay payment of incentive.
  - A. Itemized invoice for all equipment installed to include:
    - a. Equipment cost
    - b. Quantity per equipment type installed
    - Model # for each equipment type
    - Manufacturer's data sheet for each equipment model #.
  - B. Make sure the account number provided on the cover page (customer information section) is associated with the location where the equipment was installed. If the account # does not match the address where the equipment was installed, the application will be rejected as incligible.
  - C. Provide required tax ID# for payce.
  - Customer must sign and date the application after reviewing the Terms and Conditions. If customer wishes to assign payment of the incentive directly to the vendor, the customer should circle the appropriate payee in the Payment Information section of the application and sign their name to authorize payment.
- Duke Energy may require site verification of projects that have been self-installed, prior to payment of incentive.
- Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-419-5572.
- A percentage of equipment installations will be site verified for quality assurance purposes. Once selected, a Duke Energy representative will contact the customer to arrange for the inspection. All incentive payments related to the project will be withheld until site verification is complete. There is no charge to the customer for these inspections.



### Mercantile Self Direct Rebate Program Requirements for Vendor Participation

#### Program Overview

- Duke Energy offers it's eligible non-residential customers the opportunity to increase profitability through energy cost savings and contribute to a cleaner environment by participating in our Mercantile Self Direct Incentive Program.
- Under the Duke Energy Mercantile Self Direct Incentive Program. Vendor is defined as any third party who:
  - Promotes the sale and installation of the high efficiency equipment for the customer. The Vendor will ensure that the eligible equipment is installed and operating before submitting the application or assisting the customer in completing the application.
  - Is responsible for the product sale only and is not required to ensure installation of the eligible equipment.
- All license requirements, if any, are solely the Vendor's responsibility. Participating Vendors include equipment contractors, equipment Vendors, equipment manufacturers and distributors, energy service companies, etc. The typical Vendor role is to contact/solicit eligible customers building new or retrofitting existing facilities and encourage the installation of the energy-efficient equipment offered in Duke Energy's program.
- Incentives are paid directly to customers unless the customer assigns the incentive to the Vendor. The assigned incentive must reduce the purchase price paid for the equipment by an equivalent amount. Incentives are taxable to the entity who receives the rebate check. Rebates greater than \$600 will be reported to the IRS unless documentation of tax exempt status is provided.

Vendors can sign up to be on Duke Energy's Web site as a participating Vendor and be added to Duke Energy's e-mail distribution by emailing the Vendor Participation Agreement (VPA) to SelfDirect@duke-energy.com or faxing to 513-419-5572.

#### Guidelines for Vendor Activities

- Vendors shall sign and return the attached VPA to Duke Energy prior to soliciting customer participation or when submitting an application. Rebate payments will not be released to a Vendor unless a signed VPA is on file.
- Vendors shall not misrepresent the nature of their role in the program. In particular, Vendors shall not state or imply to customers, or any persons, that the Vendor is employed by or working on Duke Energy's behalf.

- Vendors may not represent to customers that Duke Energy endorses their specific products or services. Duke Energy does not endorse specific products, services, or companies - only energy-efficient technologies.
- Vendors may advise customers of their option to have Duke Energy make their rebate check(s) payable to the Vendor if the customer's rebate amount is being deducted from the total sale price in advance. The customer must complete and sign the Payment Release Authorization section of the Mercantile Self Direct Incentive Program Application.
- Vendors may use the words "Duke Energy's Mercantile Self Direct Incentive Program" in promotional materials or advertisements. Vendors may use the name Duke Energy in a text format to describe the Mercantile Self Direct Incentive Program, but are not permitted to use Duke Energy's logos.
- For Vendors who properly install the qualifying equipment, the equipment shall be installed and operating prior to an application being submitted. A percentage of each Vendor's installations will be subject to inspection by Duke Energy for verifying that the equipmen is installed and operating. Vendors demonstrating high failure rates (based on a statistically significant sample) will have 100% of subsequent jobs inspected or may have their participation in the Mercantile Self Direct Incentive Program revoked by Duke Energy is it's sole discretion.
- Vendors shall provide customers with applicable equipment warranty information for all measures installed. Vendors shall provide the required documentation for customers to apply for the rebate (invoices with model numbers and quantities, specification sheets for installed equipment, etc.) and assist customers in filling out the application.
- Vendors shall comply with all applicable local, state, and federal law. and codes when performing installation and related functions.
- Duke Energy reserves the right to revoke a Vendor's participation in Mercantile Self Direct Incentive Program if, in Duke Energy's sole judgment, the Vendor fails to comply with the program's guidelines and requirements.
- Mercantile Self Direct Incentive Program offerings may be modified or terminated without prior notice. Check Duke Energy's Web site for current program status.

For more information, call 1-866.380.9580 or visit www.duke-energy.com.



## Mercantile Self Direct Incentive Program

Technology

	Responsible for sales and not installs*	Responsible for sales and Installation*	Technology	Responsible for sales and not installs*	Responsible for sales and Installation*
Lighting			Thermal Storage		T I I I I I I I I I I I I I I I I I I I
Heating Ventilation & Cooling			Pumps/Motors/VFD's		
Food Service			Chillers	- <del> </del>	
Water Heating		h —	Refrigeration		
Process Equipment (air compressors, injection molding, etc.)  * Check all that apply			Window Film		
be on file at Duke Energy in of I have rend and understand the set forth therein. By signing the knowledge. I hereby represent information concerning my cust the customer's participation in for me understands the required	Mercantile Self Direct I is agreement, I agree to p and warrant that the Tax stomer, including but not the Mercantile Self Dire	ncentive Program Requi provide my customers wi ID and Vendor Tax Stat limited to Duke Energy et Incentive Program. Fu	rements for Vendor Particip ith information and docume tus provided below are true service account informatio	pation, and I agree to community that is true and acan are and accurate. I agree that	aply with all requirement courate to the best of my t any confidential
Vendor Federal Tax ID Number	er				
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For more information, call 1-866-380-9580 or visit www.duke-energy.com.



# OMNI-DT/OMNI-DT-RP (Option RP)

Dual Technology Ceiling Mount Sensor

#### **KEY FEATURES**

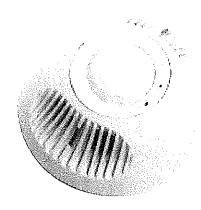
- INTELLIGENT Continuously Adapting sensor.
- · Ultrasonic & Infrared Sensing
- Simple, Fast Installation
- · Snap-Lock Sensor, Ceiling Mounting
- · Excellent false tripping immunity
- Non-Volatile Memory: settings saved in protected memory are not lost during power outages.
- Optional Photocell Control and Relay
- 500 to 2000 sq. ft. mounted at 8'
- Multiple Sensor and Power Pack Connections
- 24VDC, Class 2 low voltage wiring
- · Designed & Manufactured in USA



Occupancy sensors have two tasks; keeping the lights on while the room is occupied and keeping the lights off when unoccupied. Hubbell Building Automation's intelligent, continuously adapting sensor technology eliminates manual sensitivity and timer adjustments during installation and over the life of the product. The self-adapting microprocessor constantly assures maintenance free "Install and Forget" operation.

The OMNI-DT is a ceiling mount occupancy sensor that combines both ultrasonic (US) and passive infrared (PIR) sensing. Hubbell Building Automation's self-adapting OMNI-DT addresses areas with complex environments that are difficult to control with single technology sensors. The internal microprocessor analyzes the information from both the US and PIR technologies and determines the optimum setting to use in order to properly cover the space. The automatic timer and automatic sensitivity features of the Omni-DT work independently to prevent "false-offs" and

The OMNI-DT is the sensor replacement combining both the superior minor motion detection of ultrasonic with the excellent long-range major motion detection of passive infrared.



"false-ons." When the sensor detects motion immediately after it turns the lights out, a "false-off" is detected, timer and sensitivity are increased. If the sensor turns the lights on, but detects no immediate follow-up motion, "false-on" is detected, timer and sensitivity are decreased. The "Intelligent software" algorithm determines, for example, if the lights are staying on due to adjacent hallway traffic and responds by adapting its program to compensate for the false trigger and turns out the lights. The OMNI-DT is the sensor replacement combining both the superior minor motion detection of ultrasonic with the excellent long-range major motion detection of passive infrared.

In addition, the OMNI-DT has an optional photocell, which increases energy savings when engaged by preventing the lights from turning on when there is sufficient natural light. This feature is factory disabled and may be activated by the installer.

Designed specifically to meet the challenges found in rooms where tasks entail minor motion for long periods of time. Ultrasonic (doppler shift) motion detection gives maximum sensitivity yet can be vulnerable to false triggering from air conditioning currents, corridor activity and movement of inanimate objects. Infrared motion detection gives immunity to these false triggers, but lacks sensitivity at greater distances. Hubbell Building Automation's intelligent software reads the environment and adapts to meet these specific challenges. Should the room suddenly be reallocated into a copy room with high traffic patterns, the intelligent software will adapt as needed to provide the correct time out for the





Phone: (480) 782-5600 Fax: (480) 782-5601 www.engenuity.com



lights. Using PIR sensing (high error immunity) with US (high sensitivity) provides good performance. Conventional ceiling mounted dual tech sensors use a simple formula for operation: BOTH for ON, EITHER for KEEP ON. This method requires that both sensors receive fixed-strength signals for ON or a single fixed-level signal for KEEP ON. The OMNIDT uses a more sophisticated method called a composite signal where the signal strengths are added together to form a composite sum. The advantage of this method is that a weak PIR signal plus a strong US signal will turn the lights on because the sum is enough. The installer need not worry that the signal level be balanced for reliable lights on. This technology eliminates time consuming adjustments and callbacks found in non-intelligent sensors.

The sensor requires a 24V DC, MP Series power pack. The mounting base, provided with the sensor, allows quick and easy mounting.

#### ADAPTIVE FUNCTIONS

Time

Period

The OMNI constantly analyzes and adapts to changing conditions:

Action

Installation	60 minutes	Timer automatically resets from
		Test (8 seconds) to 8 minutes.
Learning	Four weeks	1.Response to Error
ŭ		Conditions:
		(false-ons, false offs)
		2 Air current adapation
		3. Timer optimization
		Adjustments Made:
		Ultrasonic sensitivity
		Infrared sensitivity
		Timer
		Air current threshold
Post learning	After	1.24 hour occupancy periods
Occupancy	Four weeks	learned (circadian)
Periods		2 Weekly occupancy periods
(Circadian)		learned
		Adjustments Made:
		a. Generally occupied periods:
		Threshold+High Sensivity

### **SPECIFICATIONS**

LED Lamp:

Red Infrared motion, Green Ultrasonic

mode

b. Generally unoccupied periods:

Threshold=Miser mode

motion

Construction:

Two ultrasonic transmitters and two narrow bandwidth receivers each 16mm in diameter. Frequency — Crystal controlled to  $\pm .005\%$ . Transducers — Oriented north and south (DT2000 only, others use single pairs), angled  $30^\circ$  down from horizontal.

Housing — Rugged, high-impact, injection molded plastic KJB ABS Cyolac (UL-945VA)

flame class rating, UV inhibitors.

Color-coded leads are 6".

4.5" dia., 1.5" height; 5 oz. (114 mm dia.,

38 mm height; 142 g.)

Color:

Power

Size & Weight:

Requirements:

24 VDC, 33 mA

White.

(use MP-series power pack.)

Timer Setting: Automatic - 8 min. to 32 min.;

test mode - 8 seconds
Output: 24 VDC active high log

24 VDC active high logic control signal with short circuit protection and optional

dry contact (see -RP option).

Operating

Environment: 32°F to 104°F (0°C to 40°C); 0% to 95%

non-condensing, relative humidity.

For indoor use only.

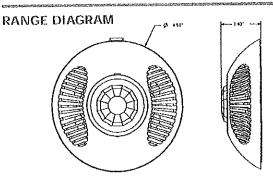
RP Option: Relay and Photocell Included (both).

Relay: NO + NC contacts, 500ma rated @ 24vdc, three wire, isolated relay. Photocell, 0-1000 Lux adjustable.

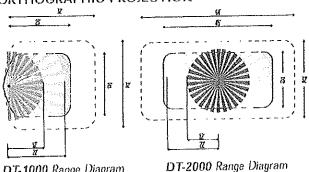
Warranty: 5 years limited.

### MODELS

Cat. No.	Color	Coverage	Application
OMNI-DT500	Off White	500 sq. ft.	Private Office
OMNI-DT500-RP	Off White	500 sq. ft.	Private Office
OMNI-DT1000	Off White	1000 sq. ft.	Open Office
OMNI-DT1000-RP	Off White	1000 sq. քւ.	Open Office
OMNI-DT2000	Off White	2000 sq. ft.	Open Office
OMNI-DT2000-RP	Off White	2000 sq. ft.	Open Office



### ORTHOGRAPHIC PROJECTION



**DT-1000** Range Diagram **DT-500** Range Pattern is not provided

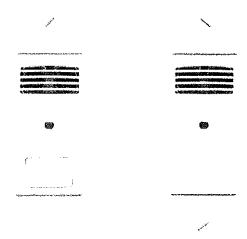


### Wall Switch Occupancy Sensors

LightHawk<sup>TM</sup> Ultrasonic Dual Circuit Wall Switch Sensor featuring IntelliDAPT®

#### **KEY FEATURES**

- · All-digital ultrasonic (US) sensor
- · IntelliDAPT self-adaptive technology--no manual adjustment required
- 2 relays for two-level switching or dual-circuit control
- · Auto-on and manual-on operating modes (depending on model)
- 400 square-foot, 180° coverage area
- Built-in photocell with SuperSaver™ mode
- Dual 120/277 VAC operation
- · No minimum load requirement
- Zero Arc Point Switching
- ETL, UL, and cUL listed
- 5-year warranty



LHUSD2

LHUSD0

#### **OVERVIEW**

LHUSD sensors use ultrasonic (US) technology for unequaled occupancy detection and false trip immunity, providing improved accuracy. The sensors, designed for dual-level lighting applications, possess 2 primary circuits (each with independent switching).

LHUSD sensors feature Hubbell Building Automation's patented IntelliDAPT technology, which makes all the sensor adjustment decisions automatically. Throughout the product's lifespan, smart software analyzes the controlled area and makes digital adjustments to sensitivity and timer settings. Occupancy sensors with IntelliDAPT provide a maintenance-free "Install and Forget" operation. With selectable operating modes—automatic ON/OFF or manual ON/automatic OFF-and a built-in photosensor for automatic daylight harvesting, LHUSD sensors are the most capable choice in today's market place.

#### FEATURES and BENEFITS

Features	Benefits
IntelliDAPT technology	<ul> <li>Sensor automatically determines the ideal setting for an area</li> <li>No manual sensitivity or timer adjustments required</li> <li>Provides a maintenance-free "Install and Forget" operation</li> </ul>
All-digital ultrasonic (US) sensor	Superior US minor-motion detection
2 relays for either two-level switching or dual-load control	<ul> <li>Controls 2 circuits (120 VAC and/or 277 VAC) independently</li> </ul>
Auto-on and manual-on operating modes (depending on model)	Provides auto-on/auto-off and manual-on/auto-off operations
Tamper-proof automatic-only version available	<ul> <li>Automatically turns lighting on and off without requiring you to push a button</li> </ul>
Built-in photocell with optional SuperSaver mode	<ul> <li>Increases energy savings by preventing lights from turning on when there is sufficient natural light</li> <li>Optional SuperSaver mode—turns lights off during periods of occupancy if there is enough natural light to illuminate the area</li> </ul>

#### **SPECIFICATIONS**

SPECIFICATIONS	
IntelliDAPT technology	Self-adjusting timer
	<ul> <li>Self-adjusting ultrasonic (US) sensitivity</li> </ul>
	<ul> <li>Automatic false-on/false-off corrections</li> </ul>
	No manual adjustments required
Timer timeout	<ul> <li>Auto mode: 4–30 minutes; self-adjusts based on occupancy</li> </ul>
	<ul> <li>Fixed mode: 4, 8, 15, and 30 minutes</li> </ul>
	Test mode: 5 seconds
Ultrasonic (US) output	40kHz output
Photocell	Natural light override range: 10-500 foot-candles
Coverage	<ul> <li>400 square-foot, 180° coverage area</li> </ul>
Power requirements	• 120/277 VAC; 50/60Hz
Electrical ratings	<ul> <li>120VAC: 800W Incandescent; 1,000W Fluorescent; 1/6 HP</li> </ul>
	<ul> <li>277VAC: 1,800W Fluorescent; 1/6 HP</li> </ul>
Load requirements	• None
Operating environment	Indoor use only
	<ul> <li>Operating temperature: 32°-104° F (0°-40° C)</li> </ul>
	<ul> <li>Relative humidity (non-condensing): 0–95%</li> </ul>
Construction	<ul> <li>Casing—high-impact injection-molded plastic (UL-94-5V)</li> </ul>
	<ul> <li>Color-coded leads are 6" long</li> </ul>
Size and weight	• Size: 4.2" x 1.8" x 2.1"; .37" extension
	<ul> <li>Weight: 2.9 oz</li> </ul>
Color	<ul> <li>White; Ivory; Light Almond; Gray; Black</li> </ul>
Mounting	<ul> <li>Single-gang NEMA-style switch box (average switch box)</li> </ul>
	<ul> <li>Decorator-style wall plate not included</li> </ul>
Certifications	ETL, UL, and cUL listed
Warranty	• 5 years

#### **HOW TO ORDER**

Catalog Number

Description

LHUSD2\*

Ultrasonic Dual Circuit Wall Switch Sensor with IntelliDAPT and Automatic/Manual Control,

120/277VAC

LHUSD0\*

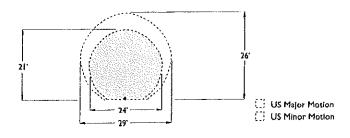
Ultrasonic Dual Circuit Wall Switch Sensor with IntelliDAPT and Automatic Only Control,

120/277VAC

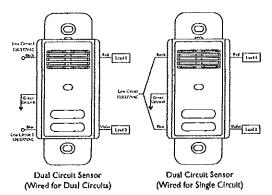
\* = W - White, I - Ivory, A - Light Almond, G - Gray, B - Black

### **RANGE DIAGRAM**

\*Refer to Application Guide.

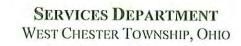


### WIRING DIAGRAM





Hubbell Building Automation, Inc.
9601 Dessau Road Building One Austin, Texas 78754
{512} 450-1100 {512} 450-1215 fax
hubbell-automation.com





DATE: June 5, 2012

RE: West Chester Township Library
Confirmation Cost Information for Lighting/Pumps/Motors/Chillers
Application ID 114926

To Whom It May Concern:

This letter is to confirm that for the renovation to the lighting system of the West Chester Township Library for the MSD Custom rebate applications, the lighting project was installed with a minimum unit cost listed below.

Description/Model#	Quantity	Price/Fixture	Amount
Hubbell Lighthawk	29	\$55.00	\$1,595.00

Total Equipment Cost: \$1,595.00

Sincerely yours,

Tim Franck

West Chester Community Services Director

## PRESCRIPTIVE VYV

#### **Ohio Mercantile Self Direct Program**

Application Guide & Cover Sheet

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.

Email this form along with <u>completed Mercantile Self Direct Prescriptive or Custom applications</u>, proof of payment, energy savings calculations and spec sheets to <u>SelfDirect@Duke-Energy.com</u>. You may also fax to 1-513-419-5572.

Mercantile customers, defined as using at least 700,000 kWh annually are eligible for the Mercantile Self Direct program. Please indicate mercantile qualification:

a single Duke Energy Ohio account

multiple accounts in Ohio (energy usage with other utilities may be counted toward the total)

Please list Duke Energy account numbers below (attach listing of multiple accounts an/or billing history for other utilities as required):

Annual Usage	Account Number	Annual Usage	
723,400			
	· · · · · · · · · · · · · · · · · · ·		

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart \$aver® Custom Incentive. Self Direct incentives are applicable to Prescriptive measures that were installed more than 90 days prior to submission to Duke Energy and have not previously received a Duke Energy Prescriptive rebate.

Self Direct Program requirements dictate that certain projects that may be Prescriptive in nature under the Smart \$aver program must be evaluated using the Custom process. Use the table on page two as a guide to determine which Self Direct program fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet. Where Mercantile Self Direct Prescriptive applications are listed, please refer to the measure list on that application. If your measure is not listed, you may be eligible for a Self Direct Custom rebate. Self Direct Custom applications, like Smart \$aver Custom applications, should include detailed analysis of pre-project and post-project energy usage and project costs. Please indicate which type of rebate applications are included in the table provided on page two.

Please check each box to indicate completion of the following program requirements:

| All sections of appropriate application(s) are completed | Proof of payment.\* | Manufacturer's Spec sheets | Energy model/calculations and detailed inputs for Custom

applications

<sup>\*</sup> If a single payment record is intended to demonstrate the costs of both Prescriptive & Custom projects, please include an additional document with an estimated breakout of costs for each Prescriptive and Custom energy conservation measure.

Application Type	Replaced equipment at end of lifetime or because equipment failed**	Replaced fully operational equipment to improve efficiency***	New Construction
	MCD Custom Boot 1	MSD Prescriptive Lighting	MSD Prescriptive Lighting 🗌
Lighting	MSD Custom Part 1  Custom Lighting Worksheet	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐
Heating & Cooling	MSD Custom Part 1	MSD Custom Part I	MSD Prescriptive Heating & Cooling
Trunking & Cooling	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1 MSD Custom General Worksheet
Window Films, Programmable Thermostats, & Guest Room Energy Management Systems	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐	MSD Prescriptive Heating & Cooling	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐
Chillers & Thermal	MSD Custom Part 1 ☐	MSD Custom Part 1	MSD Prescriptive Chillers & Thermal Storage □
Storage	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups
Motors & Punips	MSD Custom Part 1 🔲 🔠	MSD Custom Part 1 🔲	MSD Prescriptive Motors, Pumps & Drives ⊠
	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
VFDs	Not Applicable	MSD Prescriptive Motors, Pumps & Drives □	MSD Custom Part 1
YFDS	Not Applicable	MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐	MSD Custom VFD Worksheet
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Food Service
Food Service	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part 1 MSD Custom General Worksheet MSD Custom General Worksheet MSD Custom General Worksheet MSD Custom Part 1 MSD Custom Part
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Process
Air Compressors	MSD Custom Compressed Air Worksheet □	MSD Custom Compressed Air Worksheet □	MSD Custom Part 1 ☐ MSD Custom Compressed Air Worksheet ☐
	MSD Custom Part 1	MSD Prescriptive Process	MSD Custom Part I
Process	MSD Custom General Worksheet	MSD Custom Part 1  MSD Custom General Worksheet	MSD Custom General Worksheet
Energy Management Systems	MSD Custom Part 1  MSD Custom EMS Worksheet	MSD Custom Part 1  MSD Custom EMS Worksheet	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐
Behavioral*** & No/Low Cost		MSD Custom Part 1  MSD Custom General Worksheet	

application.

<sup>\*\*</sup> Under the Self Direct program, failed equipment and equipment at the end of its useful life are evaluated differently than early replacement of fully functioning equipment. All equipment replacements due to failure or old age will be evaluated via the Custom program.

<sup>\*\*\*</sup> Please ensure that you include the age of the replaced equipment for measures classified as "Early Replacement" in your application as well as the estimated date that you would have otherwise replaced the existing equipment if you had not chosen a more energy efficient option.
\*\*\*\* Behavioral energy efficiency and demand reduction projects must be both measurable and verifiable. Provide justification with your



### MERCANTILE SELF DIRECT Ohio Premium Motor/Pump/VFD Incentive Application

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.

Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-419-5572. Is this application: NEW (original) or REVISED (changes made to original application) Building Type - Required (check one) Full Service Restaurant Office Data Centers Public Assembly ☐ Education/K-12 Healthcare Industrial Public Order/Safety ☐ Education Other Religious Worship/Church ☐ Elder Care/Nursing Home Lodging Retail (Small Box) ☐ Service ☐ Food Sales/Grocery Fast Food Restaurant Retail (Big Box) ☐ Warehouse Other: How did you hear about the program? (check one) ☐ Web Site Radio Duke Energy Representative Other Contractor / Vendor Please check each box to indicate completion of the following program requirements: Invoice with make, model Tax ID number for payee All sections of application Customer/vendor agree to Terms number, quantity and equipment and Conditions manufacturer **Customer Information** Customer/Business West Chester Township Contact Tim Franck Phone 513-579-7300 Account Number 2430-3699-01-1 Street Address (Where incentive should be mailed) 9113 Cincinnati Dayton Road State West Chester Ohio Zip Code 45069 Installation Street Address 9363 Centre Pointe Drive Ohio 45069 City West Chester State Zip Code tfranck@westchesteroh.org E-mail Address Fallure to provide the account number associated with the location where the installation took place will result in rejection of the application. Vendor Information Vendor Innovative Energy Solutions Contact John Brofft 513-874-6733 Fax 513-874-8911 Phone Street Address 3680 Symmes Road State Ohio Zip Code 45015 City Hamilton E-mail Address john.brofft@ies-cin.com If Duke Energy has questions about this application, who should we contact? **⊠** Customer ☐ Vendor Payment Information Who should receive incentive payment? □ Customer Vendor (Customer must sign below) I hereby authorize payment of incentive directly Customer Signature (written signature) to the vendor: N/A Provide Tax ID Number for Payee Customer Tax ID# 31-6010106 Vendor Tax ID # N/A Terms and Conditions I have read and hereby agree to the Terms & Conditions and Program Requirements. Customer Signature Vendor Signature 1/9/12 Date N/A Date N/A Title Title

Incentives are subject to change and may be discontinued at the sole discretion of Duke Energy. Equipment must be installed and operable to be eligible for

incentives. As Federal Energy Policy Law changes, equipment efficiency requirements are subject to change.



Motor incentives will be removed from the Prescriptive Program effective March 31, 2011. To qualify for the current incentives, motors must be purchased by March 31, 2011 and installed by June 30, 2011. Applications must be received by September 30, 2011.

Certain motors will still be eligible for incentives using the custom program. Please refer to the Duke Energy Mercautile Self Direct website for further detail.

The Equipment below is (check one):	▼ New Equipment / New Construction
Early replacement of existing equipment	or replacement of failed equipment must apply for Self Direct Custom program.

Motor Motor	Make/Model or Catalog #	Quantity	Турс	RPM	Incentive	HP	Installed Nominal Efficiency*	Annual Operating Hrs (Minimum of 2000)	Equipment Cost	Date Installed and Operable (num/yy)	Total Incentive
1-5 HP			OPEN TEFC	☐ 1200 ☐ 1800 ☐ 3600		HP	%	Hrs			
7.5-20 HP	WEG / 01018ET3E215TC	4	□ OPEN ⊠ TEFC	☐ 1200 ☑ 1800 ☐ 3600	1	10HP	91.7%	4380Hrs	\$884.00	7/09	\$160.00
25-100 HP			OPEN TEFC	☐ 1200 ☐ 1800 ☐ 3600	\$2.50/HP	HP	%	Hrs			
125 250 HP			□ OPEN □ TEFC	☐ 1200 ☐ 1800 ☐ 3600	\$2/HP	HP	%	Hirs			

<sup>\*</sup>Incentive capped at 50% of project cost (equipment and external labor).

Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.

- Motor/pump load must be served by Duke Energy and installed in customer's facility.
- Replaced motors shall be disposed of or recycled (not to be resold or rewound).
- Motor(s) and pump(s) must operate a minimum of 2000 hours annually to be eligible.

<sup>·</sup> Qualifying motors must be three-phase open drip (ODP) or totally enclosed fan cooled (TEFC) units with nominal speeds of 1200, 1800, or 3600 RPM.

Efficiencies are to be full-load nominal efficiencies tested in accordance with IEE Standards 112, Method B. Please refer to attached table to determine qualifying efficiencies.

Motor shall be squirrel cage design and conform to NEMA Premium design A, B or C torque characteristics.



The Equipment below is (check one): 
New Equipment / New Construction
Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.

Pump	Make/Model or Catalog #	Quantity	Incentive	Installed Nominal Efficiency* (pump curve)	Annual Operating Hrs (Minimum of 2000)	Equipment Cost	Date Installed and Operable (mm/yy)	Total Incentive
1.5 HP			\$61.00/PUMP	%	Hrs			
2 HP			\$87.50.00/PUMP	%	Hrs			1
3 HP			\$87.50/PUMP	%	Hrs			<b>†</b>
5 HP			\$85.00./PUMP	%	Hrs			
7.5 HP			\$124.50/PUMP	%	Hrs			<b> </b>
10 HP	Bell & Gossett / 1510 2.5"	4	\$82.50.00/PUMP	77%	4380Hrs	\$2,863.00	7/09	\$330.00
15 HP			\$145.00/PUMP	%	Hrs		<u> </u>	
O HP			\$200.00/PUMP	%	Hrs			<del> </del>

<sup>\*</sup>Incentive capped at 50% of project cost (equipment and external labor).

- Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.
- Motor/pump load must be served by Duke Energy and installed in customer's facility.

  Pump efficiency is based on the design point on the pump curve. Documentation of the pump curve is required to receive an incentive.
- The pump efficiency at the design point on the pump curve must meet nominal efficiencies as stated in table on page 4.
- Duplicative to the first bullet point.



	ipment below is (check one):  Retrofit nent of failed equipment or new construction		tives.	·	F. 11.11 (1.11 )		
(Retrof	e Frequency Drives (VFDs) — For Procest's Application only)  pumping <u>does not</u> include HVAC or sw		iig systems,				
<u> </u>	cess Pumping Application	- Io	1	T	1	I	- I
VFD**	Make/Model or Catalog #	Quantity	Incentive***	Annual Operating Hrs (Minimum of 2000)	Project Cost	Date Installed and Operable (mm/yy)	Total Incentive
5 HP			\$20.00/HP	Hrs			-
7.5 HP			\$20.00/HP	Hrs			
10 HP			\$20.00/HP	Hrs			
15 HP			\$20.00/HP	Hrs			
20 HP			\$20.00/HP	Hrs			
25 HP			\$20.00/HP	Hrs	·· <del> </del>		1
30 HP			\$20,00/HP	Hrs			
40 HP			\$20.00/HP	Hrs			
50 HP			\$20.00/HP	Hrs			
*Retrofi	t only incentives are only avnilable for	new VFDs installed on e	xisting Ruid pro	cess pump system	15.	<u>, L </u>	

Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.

\*\*Incentives are capped at 50% of project cost (equipment and external labor).

· Variable Frequency Drive Fans & Pumps qualifying equipment must have 2000 annual run hours or more.

- A 3% impedance reactor on the AC input to the VSD is recommended to prevent damage to the VSD due to overvoltage from power factor
  correction and should be properly sized by your supplier. A 5% reactor may be recommended if there is additional harmonic distortion on
  the AC input lines due to other plant-specific causes.
- VFDs on new equipment do not qualify under this program; but may qualify through the custom program. Please refer to the Custom
  website for guidance. Incentives will be paid for the installation of NEW VFDs on existing fan/pump systems and process equipment only.
- Replacement of existing VFDs does not qualify for incentives.

program. Please refer to the custom webpage for guidance.

- VFDs installed on redundant pumps do not qualify.
- VFDs installed in newly constructed facilities do not qualify for incentives.
- VFD speed must be automatically controlled by differential pressure, flow, temperature, or other variable signal.
- · Existing throttling devices including inlet vanes, bypass dampers, and throttling valves must be removed or permanently disabled.

\*\* VFDs over 50 HP and VFDs on new equipment are not eligible for prescriptive incentives, but may qualify through the custom

Duplicative to the first bullet point.



	: Frequency Drives (VFDs) — Appl t* Application only)	lied to HVAC Fans Only					
200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC Applications (please check one	<b>)</b> :					
□ Տսթբ	ly Fan	Cooling Tower Fan		□R	eturn Fan		
☐ Exha	ust Fan						
VFD**	Make/Model or Catalog #	Quantity	Incentive***	Annual Operating Hrs (Minimum of 2000)	Project Cost	Date Installed and Operable (mm/yy)	Total Incentive
1,5 HP			\$50.00/HP	Hrs			
2 HP			\$50.00/HP	Hrs			
3 HP			\$50.00/HP	Hrs			
5 HP			\$50.00/HP	Hrs			
7.5 HP			\$50.00/HP	Hrs			
10 HP			\$50,00/HP	Hrs			
15 HP			\$50.00/HP	Hrs			
20 HP			\$50.00/HP	Hrs			
25 HP			\$50.00/HP	Hrs			
30 HP			\$50.00/HP	Hrs			
40 HP			\$50.00/HP	Hrs			
50 HP	Marin Annual		\$50.00/HP	Hrs	<b>†</b>	1	

- Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.
- Variable Frequency Drive Fans & Pumps qualifying equipment must have 2000 annual run hours or more.
- A 3% impedance reactor on the AC input to the VSD is recommended to prevent damage to the VSD due to overvoltage from power factor
  correction and should be properly sized by your supplier. A 5% reactor may be recommended if there is additional harmonic distortion on
  the AC input lines due to other plant-specific causes.
- VFDs on new equipment do not qualify under this program; but may qualify through the custom program. Please refer to the Custom
  website for guidance. Incentives will be paid for the installation of NEW VFDs on existing fan/pump systems and process equipment only.
- Replacement of existing VFDs does not qualify for incentives.
- VFDs installed on redundant pumps do not qualify.
- VFDs installed in newly constructed facilities do not qualify for incentives.
- VFD speed must be automatically controlled by differential pressure, flow, temperature, or other variable signal.
- Existing throttling devices including inlet vanes, bypass dampers, and throttling valves must be removed or permanently disabled.
- Duplicative to the first bullet point.



The Equipment below is (check one); Retrofit Replacement of failed equipment or new construction is not eligible for incentives. Variable Frequency Drives (VFDs) – Applied to HVAC Pumps Only (Retrofit\* Application only) VFD HVAC Applications (please check one): Chilled Water Pump Condenser Pump Hot Water Pump VFD\*\* Make/Model or Catalog # Quantity Incentive\*\*\* Total Incentive Annual Project Date Installed Operating Hrs Cost and Operable (Minimum of (mm/yy) 2000) 1.5 HP \$50.00/HP Hrs 2 HP \$50.00/HP Hrs 3 HP \$50.00/HP Hrs 5 HP \$50.00/HP Hrs 7.5 HP \$50.00/HP Hrs 10 HP \$50.00/HP Hrs 15 HP \$50.00/HP Hrs 20 HP \$50.00/HP Hrs 25 HP \$50.00/HP Hrs 30 HP \$50.00/HP Hrs 40 HP \$50.00/HP Hrs 50 HP \$50.00/HP Hirs \* Retrofit only – incentives are only available for new VFDs installed on existing HVAC pumps systems, \*VFDs over 50 HP and VFDs on new equipment are not eligible for prescriptive incentives, but may qualify through the custom program. Please refer to the custom webpage for guidance. \*\*Incentives are capped at 50% of project cost (equipment and external labor).

Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.

Variable Frequency Drive Fans & Pumps qualifying equipment must have 2000 annual run hours or more.

A 3% impedance reactor on the AC input to the VŠD is recommended to prevent damage to the VSD due to overvoltege from power factor
correction and should be properly sized by your supplier. A 5% reactor may be recommended if there is additional harmonic distortion on
the AC input lines due to other plant-specific causes.

VFDs on new equipment do not qualify under this program; but may qualify through the custom program. Please refer to the Custom
website for guidance. Incentives will be paid for the installation of NEW VFDs on existing fan/pump systems and process equipment only.

Replacement of existing VPDs does not qualify for incentives.

VFDs installed on redundant pumps do not qualify.

· VFDs installed in newly constructed facilities do not qualify for incentives.

VFD speed must be automatically controlled by differential pressure, flow, temperature, or other variable signal.

· Existing throttling devices including inlet vanes, bypass dampers, and throttling valves must be removed or permanently disabled.

. Duplicative to the first bullet point.



### Efficiencies for Premium Motor/Pump Mcasures

		Open Drip Pro	oof		Totally Enclosed Far	n-Cooled
HP	1200 RPM	1800 RPM	3600 RPM	1200 RPM	1800 RPM	3600 RPM
1	82.5	85.5	77.0	82.5	85.5	77.0
1.5	86.5	86.5	84.0	87.5	86.5	84.0
2	87.5	86.5	85.5	88.5	86.5	85.5
3	88.5	89.5	85.5	89.5	89.5	86.5
5	89.5	89.5	86,5	89.5	89.5	88.5
7.5	90.2	91.0	88.5	91.0	91.7	89.5
10	91.7	91.7	89.5	91.0	91.7	90.2
15	91.7	93.0	90.2	91.7	92.4	91,0
20	92.4	93.0	91.0	91.7	93.0	91.0
25	93.0	93.6	91.7	93.0	93.6	91.7
30	93.6	94.1	91.7	93.0	93.6	91.7
40	94.1	94.1	92.4	94.1	94.1	92.4
50	94.1	94.5	93.0	94.1	94.5	93.0
60	94.5	95.0	93.6	94.5	95.0	93.6
75	94.5	95.0	93.6	94.5	95.4	93.6
100	95.0	95.4	93.6	95.0	95.4	94.1
125	95.0	95.4	94.1	95.0	95.4	95.0
150	95.4	95.8	94.1	95.8	95.8	95.0
200	95.4	95.8	95.0	95.8	96.2	95.4
250	95.4	95.8	95.0	95.8	96.2	95.8

Nominal Efficienc	ies for Pumps
НР	Efficiency
1.5	efficiency of 65% or more for system
2	efficiency of 65% or more for system
3	efficiency of 67% or more for system
5	efficiency of 70% or more for system
7.5	efficiency of 73% or more for system
10	efficiency of 75% or more for system
15	efficiency of 77% or more for system
20	efficiency of 77% or more for system



#### **Program Requirements**

#### Incentive Eligibility

· Incentives are only available to customers on a Duke Energy Ohio non-residential rate.

• Duke Energy Customers who purchase electric generation from an alternative supplier are eligible to participate.

 Incentive will not be paid until eligible equipment has been installed, is available to operate, and verification has been completed by Duke Energy staff as noted in the Term & Conditions stated below.

Duke Energy reserves the right to revise incentive levels and/or qualifying efficiency levels at any time.

- Customer may assign the incentive to the vendor who installed/supplied the equipment. The customer's signature is required in the
  Payment Information section on page 1 of this form to assign the incentive to the vendor. Customer agrees that such an action constitutes an irrevocable
  assignment of the incentive. This assigned incentive must reduce the purchase price paid for the equipment by an equivalent amount.
- Leased equipment is eligible for incentives providing the equipment meets the program requirements and the customer provides the
  required documentation noted on the Incentive Application Process page of this application.
- Any equipment which, either separately or as part of a project, has or will receive an incentive from any other Duke Energy program
  is ineligible.

In no case will Duke Energy pay an incentive above the actual cost of the new equipment.

· Incentive recipient assumes all responsibilities for any tax consequences resulting from Duke Energy incentive payment.

• To qualify for Duke Energy incentives, applicants who provide their social security number as their federal tax identification number for tax purposes must sign and return the "Customer consent to release personal information" form ("Consent Form") along with the application. Incentive applications are processed by a 3<sup>rd</sup> party vendor. The 3<sup>rd</sup> party vendor is responsible for mailing the 1099 form at the end of the calendar year for tax filing. Duke Energy and the 3<sup>rd</sup> party vendor have signed a confidentiality agreement to protect your personal information. If your social security number is your federal tax ID number and you elect not to sign the Consent Form, please do not send Duke Energy the application, as you will not be qualified to participate in the incentive program.

#### **Terms and Conditions**

I certify that this premise is served by Duke Energy (or an affiliate of Duke Energy), that the information provided herein is accurate and complete, and that I have purchased and installed the high efficiency equipment (indicated herein) for the business facility listed herein and not for resale. Attached is an itemized invoice for the indicated installed equipment. In understand that the proposed incentive payment from Duke Energy is subject to change based on verification and Duke Energy approval. I agree to Duke Energy verification of both the sales transaction and equipment installation which may include a site inspection from a Duke Energy representative or Duke Energy agent. I understand that I am not allowed to receive more than one incentive from Duke Energy on any piece of equipment. I also understand that my participation in the program may be taxable and that my company is solely responsible for paying all such taxes. I hereby agree to indemnify, hold harmless and release Duke Energy and it's affiliates from any actions or claims in regards to the installation, operation and disposal of equipment (and related materials) covered herein including liability from an incidental or consequential damages. Duke Energy does not endorse any particular manufacturer, product or system design within these programs; does not expressly or implicitly warrant the performance of installed equipment (Contact your contractor for details regarding equipment warranties and is not liable for any damage caused by the installation of the equipment nor for any damage caused by the malfunction of the installed equipment.



#### **Incentive Application Instructions**

#### IMPORTANT NOTICE

Delays in processing incentive payments will occur if required documentation is not included with completed application(s).

- Contact Duke Energy toll free at 866-380-9580 to confirm customer eligibility. Applications are available for download at www.duke-energy.com.
- Review program and equipment requirements on the incentive application. (Page7)
- 3. Purchase and install eligible energy-efficient equipment.
- Complete and submit application for equipment that was installed after 1/1/2008.
- 5. The following items must be included to verify projects. If they are not included, it will delay payment of incentive.
  - A. Itemized invoice for all equipment installed to include:
    - a. Equipment cost
    - b. Quantity per equipment type installed
    - c. Model # for each equipment type
    - d. Manufacturer's data sheet for each equipment model #.
  - B. Make sure the account number provided on the cover page (customer information section) is associated with the location where the equipment was installed. If the account # does not match the address where the equipment was installed, the application will be rejected as ineligible.
  - C. Provide required tax ID# for payee.
  - D. Customer must sign and date the application after reviewing the Terms and Conditions. If customer wishes to assign payment of the incentive directly to the vendor, the customer should circle the appropriate payer in the Payment Information section of the application and sign their name to authorize payment.
- 6. Duke Energy may require site verification of projects that have been self-installed, prior to payment of incentive.
- 8. Email the complete, signed application with all required documents to SeffDirect@duke-energy.com or fax to 513-419-5572.
- 8. A percentage of equipment installations will be site verified for quality assurance purposes. Once selected, a Duke Energy representative will contact the customer to arrange for the inspection. All incentive payments related to the project will be withheld until site verification is complete. There is no charge to the customer for these inspections.



#### Mcrcantile Self Direct Incentive Program Requirements for Vendor Participation

#### **Program Overview**

- Duke Energy offers it's eligible non-residential customers the opportunity to increase profitability through energy cost savings and contribute to a cleaner environment by participating in our Mercantile Self Direct Incentive Program.
- Under the Duke Energy Mercantile Self Direct Incentive Program, Vendor is defined as any third party who:
  - Promotes the sale and installation of the high efficiency equipment for the customer. The Vendor will ensure that the eligible equipment is installed and operating before submitting the application or assisting the customer in completing the application.
  - Is responsible for the product sale only and is not required to ensure installation of the eligible equipment.
- All license requirements, if any, are solely the Vendor's
  responsibility. Participating Vendors include equipment contractors,
  equipment Vendors, equipment manufacturers and distributors,
  energy service companies, etc. The typical Vendor role is to
  contact/solicit eligible customers building new or retrofitting existing
  facilities and encourage the installation of the energy-efficient
  equipment offered in Duke Energy's program.
- Incentives are paid directly to customers unless the customer assigns
  the incentive to the Vendor. The assigned incentive must reduce the
  purchase price paid for the equipment by an equivalent amount.
  Incentives are taxable to the entity who receives the rebate check.
  Rebates greater than \$600 will be reported to the IRS unless
  documentation of tax exempt status is provided.

Vendors can sign up to be on Duke Energy's Web site as a participating Vendor and be added to Duke Energy's e-mail distribution by emailing the Vendor Participation Agreement (VPA) to <u>SelfDirect@duke-energy.com</u> or faxing to 513-419-5572.

#### Guidelines for Vendor Activities

- Vendors shall sign and return the attached VPA to Duke Energy prior to soliciting customer participation or when submitting an application. Rebate payments will not be released to a Vendor unless a signed VPA is on file.
- Vendors shall not misrepresent the nature of their role in the program. In particular, Vendors shall not state or imply to customers, or any persons, that the Vendor is employed by or working on Duke Energy's behalf.

- Vendors may not represent to customers that Duke Energy endorses their specific products or services. Duke Energy does not endorse specific products, services, or companies – only energy-efficient technologies.
- Vendors may advise customers of their option to have Duke Energy
  make their rebate check(s) payable to the Vendor if the customer's
  rebate amount is being deducted from the total sale price in advance.
  The customer must complete and sign the Payment Release
  Authorization section of the Mercantile Self Direct Incentive
  Program Application.
- Vendors may use the words "Duke Energy's Mercantile Self Direct Incentive Program" in promotional materials or advertisements.
   Vendors may use the name Duke Energy in a text format to describe the Mercantile Self Direct Incentive Program, but are not permitted to use Duke Energy's logos.
- For Vendors who properly install the qualifying equipment, the
  equipment shall be installed and operating prior to an application
  being submitted. A percentage of each Vendor's installations will be
  subject to inspection by Duke Energy for verifying that the
  equipment is installed and operating. Vendors demonstrating high
  failure rates (based on a statistically significant sample) will have
  100% of subsequent jobs inspected or may have their participation in
  the Mercantile Self Direct Incentive Program revoked by Duke
  Energy in it's sole discretion.
- Vendors shall provide customers with applicable equipment warranty
  information for all measures installed. Vendors shall provide the
  required documentation for customers to apply for the rebate
  (invoices with model numbers and quantities, specification sheets for
  installed equipment, etc.) and assist customers in filling out the
  application.
- Vendors shall comply with all applicable local, state, and federal laws and codes when performing installation and related functions.
- Duke Energy reserves the right to revoke a Vendor's participation in Mercantile Self Direct Incentive Program if, in Duke Energy's sole judgment, the Vendor fails to comply with the program's guidelines and requirements.
- Mercantile Self Direct Incentive Program offerings may be modified or terminated without prior notice. Check Duke Energy's Web site for current program status.

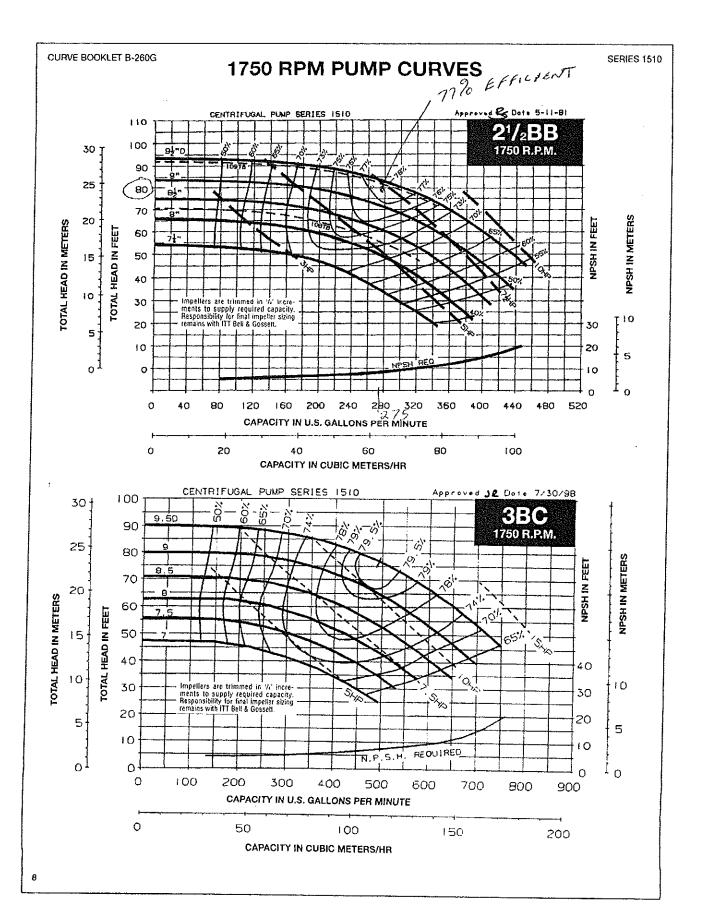
For more information, call 1-866.380.9580 or visit www.duke-energy.com.



### Mercantile Self Direct Rebate Program

Technology	Responsible for sales and not installs*	Responsible for sales and Installation*	Technology	Responsible for sales and not installs*	Responsible for sales and Installation*
Lighting			Thermal Storage		
Heating Ventilation & Cooling			Pumps/Motors/VFDs		
Food Service			Chillers		
Water Heating			Refrigeration		
Process Equipment (air compressors, injection molding, etc.)  * Check all that apply			Window Film		
Vendors who wish to be listed a confile at Duke Energy in order I have read and understand the set forth therein. By signing this knowledge. I hereby represent a information concerning my customer's participation in the landerstands the requirements property.	for the Vendor to receive Mercantile Self Direct Incs agreement, I agree to prand warrant that the Tax I tomer, including but not I Mercantile Self Direct Inc	e incentive payments. Fax centive Program Require tovide my customers with D and Vendor Tax Status imited to Duke Energy so centive Program. Further,	s form to 513-419-5572 or ments for Vendor Participa i information and documer is provided below are true a ervice account information	email to SelfDirect@dukc ation, and I agree to compl atation that is true and accu and accurate. I agree that a buil be used for the sole	e-chergy.com, y with all requirements trate to the best of my ny confidential purpose of facilitating the
Vendor Federal Tax ID Numbe	r				
Fo qualify for Duke Energy inc sign and return the "Customer c by a third-party vendor. The thin hird-party vendor have signed of you elect not to sign the Consen	onsent to release persona rd-party vendor is respons confidentiality agreement	I information" form ("Co sible for mailing the 1099 to protect your personal	nsent Form") along with to form at the end of the cal information, If your social	he application. Incentive a endar year for tax filing. I security number is your f	pplications are processed Duke Energy and the ederal tax ID number and
Vendor Tax Status	Corporation	☐ Individual/Sole Prop	prietor Partnersh	ip 🔲 Otl	ner
Contact me via	Phone	☐ E-Mail	☐ Mail		
Company Name Mailing Address City, State, Zip Phone/Fax Primary E-mail Address Gecondary E-mail Address / endor Signature Citle Print Name					
Pale					

For more information, call 1-866-380-9580 or visit www.duke-energy.com.



Pumps For Heating

Bell & Gossett

Series 1510 Pumps & Parts



#### MASTER DISTRIBUTOR

State Supply is a Belf & Gossett Master Distributor. We carry Belf & Gossett's entire line of hydronic pumps and repair parts, as well as many obsolete parts. Custom-built Belf & Gossett pumps are shipped in as little as 3-days

#### Free Bell & Gossett Catalog



View repair parts guides, schematic drawings and product specs in the <u>Bell & Gossett Maintenance & Repair Guide</u> from State Supply. Click the cover image to get your free copy!

#### FILTER PRODUCTS

#### Horse Power

10 hp (2)

100 hp (1)

125 hp (6)

15 hp (2)

2 hp (1)

20 hp (3)

25 hp (3) 3 hp (2)

30 hp (1)

40 hp (3)

5 hp (3)

50 hp (2)

60 hp (2)

7-1/2 hp (3)

75 hp (4)

### Material Cast (con (38)

Phase

Three (38)

Manufacturer

Boll & Gossett (38)

RECENTLY VIEWED

#### Series 1510 Pumps & Parts

Bett & Gossett 1510 pumps are ready to ship 3-days after your order is received. This Bett Gossett 1510 pump is assembled at one of two U.S. distribution centers. State Supply pricing on the Bett Gossett 1510 series of pumps is tought to beat - And with only 3-days needed between receipt of order and shipment, the Bett Gossett 1510 pump lead time is almost unbelievable. On top of everything else, a full line of Bett Gossett 1510 pump repair parts are inventoried and ready for same-day shipping.

Documentation

Overview

Diagram

#### Bell & Gossett 1510 Pump Documentation

Order Guide

Performance Curves

Installation & Service



# Bell Gossett 1510 Pump - Model 2E with 100 HP, 3550 RPM Motor

SKU: BH1846

Bell & Gossett 1510 2E large bearing frame, basemounted centrifugal pump. 3" 125 lb. flanged and suction x 2" 125 lb. flanged top discharge with 100 HP 3550 RPM, 230/460/60/3 TEFC motor. 11" full runner bronze impeller with 475 GPM at 475 TFH. Learn More. \$11,692,76

Add to Cart

<u>Add to WishEst</u> Add to Compare



# Bell Gossett 1510 Pump - Model 2G with 20 HP, 1800 RPM Motor

SKU: BH1851

Bell & Gossett 1510 2G large bearing frame, basemounted centrifugal pump. 3" 125 ib, flanged and suction x 2" 125 ib, flanged top discharge with 20 HP 1800 RPM 208-239/460/60/3 TEFC motor, 13-1/2" full runner bronze impeter with 280 GPM at 180 TFH. Learn Mote \$4,074.13

Add to Cart

Add to Wishks! Add to Compare



#### Bell Gossett 1510 Pump - Model 2-1/2AB with 5 HP, 1800 RPM Motor \$KU: BH1825

Bell & Gossett 1510 2-1/2AB small bearing frame, base-mounted centrifugal pump, 3" 125 lb. flanged end suction × 2-1/2" 125 lb. flanged top discharge with 5 HP 1800 RPM, 208-230/460/50/3 TEFC motor, 7" full runner bronze impelier with 200 GPM at 42 TFH Learn More.

\$2,090.22

Add to Cart

Add to Washlist
Add to Compare



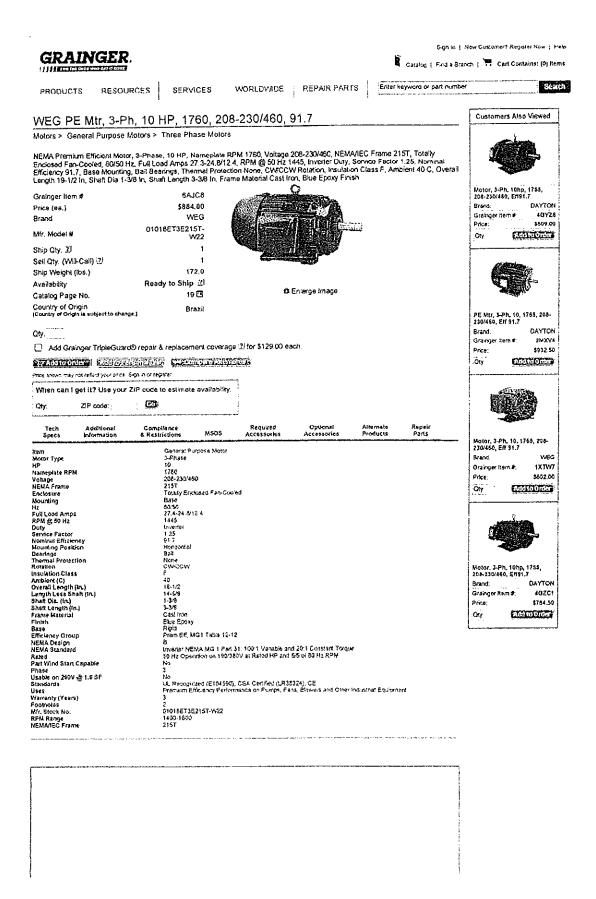
#### Bell Gossett 1510 Pump - Model 2-1/2B8 with 10 HP, 1800 RPM Motor SKU: BH1830

Bell & Gossett 1510 2-1/2BB small bearing frame, base-mounted centrifugal pump, 3" 125 lb, flanged end suction x 2-1/2" 125 lb, flanged top discharge with 10 HP 1800 RPM, 208-230/450/60/3 TEFC motor, 9-

\$2,863.78

Add to Carl

Add to Corregie



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# ELECTRICAL DATA



#### WZ1HIGH EFFICIENCY - GENERAL FURTPSEMOTORS NEWA TI - TEFC - THREE PHASE

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1 1	0.75	1155	1451	3.40	1.70	1.35	1	6.8	4.49	2.3	3.0	75.5	60.0	60.0	0.48	0.50	9,69	1.25	0.13289	22	48	48	49
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		3520	286TS	67.5	33.8	27.0	G	5.4	44.2	1.9	2.3	90.2	91.0	91.0	0.84	0.88	0.90	1.25	2.67838	19	42	400	75
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The values shown are subject to change without prior notice. To obtain guaranteed values, please contact our nearest sales office.



# SERVICES DEPARTMENT WEST CHESTER TOWNSHIP, OHIO

DATE: June 5, 2012

RE: West Chester Township Library
Confirmation Cost Information for Lighting/Pumps/Motors/Chillers
Application ID 114938

To Whom It May Concern:

This letter is to confirm that for the renovation to the HVAC mechanical systems of the West Chester Township Library for the MSD Custom rebate applications, the motor was installed with a minimum unit cost listed below.

Description/Model#	Quantity	Price/Fixture	Amount		
WEG / 01018ET3E215TC	4	\$221.00	\$884.00		

Sincerely yours,

Tim Franck

West Chester Community Services Director



# SERVICES DEPARTMENT WEST CHESTER TOWNSHIP, OHIO

DATE: June 5, 2012

RE: West Chester Township Library
Confirmation Cost Information for Lighting/Pumps/Motors/Chillers
Application ID 114938

To Whom It May Concern:

This letter is to confirm that for the renovation to the HVAC mechanical systems of the West Chester Township Library for the MSD Custom rebate applications, the pump was installed with a minimum unit cost listed below.

Description/Model#	Quantity	Price/Fixture	Amount
Bell & Gossett / 1510 2.5"	4	\$715.75	\$2,863.00

4

Total Equipment Cost: \$2,863.00

Sincerely yours,

Tim Franck

West Chester Community Services Director

### PRESCRIPTIVE CHILLER

#### **Ohio Mercantile Self Direct Program**

Application Guide & Cover Sheet

Questions? Call 1-866-380-9580 or visit www.duke-energy.com.

Email this form along with <u>completed Mercantile Self Direct Prescriptive or Custom applications</u>, proof of payment, energy savings calculations and spec sheets to <u>SelfDirect@Duke-Energy.com</u>. You may also fax to 1-513-419-5572.

Mercantile customers, defined as using at least 700,000 kWh annually are eligible for the Mercantile Self Direct program. Please indicate mercantile qualification:

a single Duke Energy Ohio account

multiple accounts in Ohio (energy usage with other utilities may be counted toward the total)

Please list Duke Energy account numbers below (attach listing of multiple accounts an/or billing history for other utilities as required):

Annual Usage	Account Number	Annual Usage	
723400			

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart \$aver® Custom Incentive. Self Direct incentives are applicable to Prescriptive measures that were installed more than 90 days prior to submission to Duke Energy and have not previously received a Duke Energy Prescriptive rebate.

Self Direct Program requirements dictate that certain projects that may be Prescriptive in nature under the Smart \$aver program must be evaluated using the Custom process. Use the table on page two as a guide to determine which Self Direct program fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet. Where Mercantile Self Direct Prescriptive applications are listed, please refer to the measure list on that application. If your measure is not listed, you may be eligible for a Self Direct Custom rebate. Self Direct Custom applications, like Smart \$aver Custom applications, should include detailed analysis of pre-project and post-project energy usage and project costs. Please indicate which type of rebate applications are included in the table provided on page two.

Please check each box to indicate cor	impletion of the following program re	equirements:	
All sections of appropriate application(s) are completed	Proof of payment.*	Manufacturer's Spee sheets	Energy model/calculations and detailed inputs for Custom applications
·			

<sup>\*</sup> If a single payment record is intended to demonstrate the costs of both Prescriptive & Custom projects, please include an additional document with an estimated breakout of costs for each Prescriptive and Custom energy conservation measure.

Application Type	Replaced equipment at end of lifetime or because equipment failed**	Replaced fully operational equipment to improve efficiency***	New Construction
	MSD Custom Part 1	MSD Prescriptive Lighting	MSD Prescriptive Lighting [
Lighting	Custom Lighting Worksheet	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐	MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Heating & Cooling
Heating & Cooling	MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part I ☐ MSD Custom General Worksheet ☐
Window Films, Programmable Thermostats, & Guest Room Energy Management Systems	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐	MSD Prescriptive Heating & Cooling	MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐
Chillers & Thermal			MSD Prescriptive Chillers & Thermal Storage ⊠
Storage	MSD Custom General Worksheet	MSD Custom General Worksheet 🗌	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
Chiller Tunc-ups	MSD Prescriptive Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups []	MSD Prescriptive Chiller Tune-ups
	MSD Custom Part 1	MSD Custom Part 1	MSD Prescriptive Motors, Pumps & Drives []
Motors & Pumps	MSD Custom General Worksheet 🗌	MSD Custom General Worksheet	MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐
		MSD Prescriptive Motors, Pumps & Drives □	MSD Custom Part 1
VFDs	Not Applicable	MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐	MSD Custom VFD Worksheet
	MCD Courter Dort 1	MSD Custom Part 1	MSD Prescriptive Food Service
Food Service	MSD Custom Part 1  MSD Custom General Worksheet	MSD Custom General Worksheet	MSD Custom Part I  MSD Custom General Worksheet
		MSD Custom Part 1	MSD Prescriptive Process
Air Compressors	MSD Custom Part 1  MSD Custom Compressed Air Worksheet	MSD Custom Part 1  MSD Custom Compressed Air Worksheet	MSD Custom Part 1 ☐ MSD Custom Compressed Air Worksheet ☐
	, , , , , , , , , , , , , , , , , , ,	MSD Prescriptive Process	MSD Custom Part 1
Process	MSD Custom Part 1  MSD Custom General Worksheet	MSD Custom Part 1  MSD Custom General Worksheet	MSD Custom General Worksheet [
Energy Management	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐	MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐	MSD Custom Part 1   MSD Custom EMS Worksheet
Systems  Behavioral*** &  No/Low Cost		MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐	

\*\*\*\* Behavioral energy efficiency and demand reduction projects must be both measurable and verifiable. Provide justification with your application.

Rev 11/11

<sup>\*\*</sup> Under the Self Direct program, failed equipment and equipment at the end of its useful life are evaluated differently than early replacement of fully functioning equipment. All equipment replacements due to failure or old age will be evaluated via the

Custom program.

\*\*\* Please ensure that you include the age of the replaced equipment for measures classified as "Early Replacement" in your application as well as the estimated date that you would have otherwise replaced the existing equipment if you had not chosen a more energy efficient option.



# MERCANTILE SELF DIRECT Ohio Chillers / Thermal Storage Incentive Application

Questions? Call 1-866-380-9580 or visit <a href="https://www.duke-energy.com">www.duke-energy.com</a>.

Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-419-5572

Is this applicat	ion: 🛛	NEW (original) or	REVISED	(changes mad	le to original a	oplication)		
Building Type - Required (check	one)					1 1		
☐ Data Centers		☐ Full Service Rest	aurant		Of	fice		
☐ Education/K-12		☐ Healthcare			⊠ Pul	blic Assembly	111	
☐ Education Other		☐ Industrial			☐ Public Order/Safety			
☐ Elder Care/Nursing Home		Lodging			Religious		urch	
☐ Food Sales/Grocery		Retail (Small Bo	x)		☐ Ser			
Fast Food Restaurant		Retail (Big Box)			□ Wa	rehouse		
Other:			-			300 2007		
How did you hear about the progr	am? (chec	k one)					10	
☐ Duke Energy Representative		☐ Web Site			□ Rac	Radio		
Contractor / Vendor		Other						
Please check each box to indicate co						r		
	nu	voice with make, model imber, quantity and equipme anufacturer		D number for	payce	Customer/v and Condit	endor agree to Term ions	
Customer Information								
Customer/Business	West (	Chester Township	Contact			Tim Franck		
Phone	513-75	9-7300	Accoun	count Number		2430-3699-01-1		
Street Address (Where incentive show	uld be mail	ed)	9113 C	113 Cincinnati Dayton Road				
City	West C	Chester	State	C	Ohio	Zip Code	45069	
nstallation Street Address	9363 C	Centre Pointe Drive		3V 20 10	7177			
City	West C	Chester	State	C	Ohio	Zip Code	45069	
E-mail Address	tfrancl	@westchesteroh.org					77	
Failure to provide the account number			allation took p	olace will result	t in rejection of	the application.	00-12-	
endor Information								
/endor	Innova	tive Energy Solutions	Contact		John Brofft			
Phone	513-87-	4-6733	Fax					
Street Address	3680 S	ymmes Road						
lity	Hamilt	on	State	C	Ohio	Zip Code	45015	
E-mail Address	john.bi	rofft@ies-cin.com						
f Duke Energy has questions abou	t this appli	ication, who should we con	tact?		Customer	☐ Vendo	r	
ayment Information							11 11 11	
Who should receive incentive paymen	nt?	⊠ Customer		□ V	endor (Custor	ner must sign belov	v)	
hereby authorize payment of incenti	ve directly	Customer Signature (writte	en signature)					
the vendor:		Date		N/A	N/A			
rovide Tax ID Number for Payee		Customer Tax ID #		31-60	010106			
		Vendor Tax ID#		N/A				
erms and Conditions			+					
have read and hereby agree to the Te	erms & Co	nditions and Program Requi	rements.					
Customer Signature Auto	- Address - Company	sylv		Signature				
Date /	1.30.		Date		N/A			
l'itle	120	1	Title		N/A			
ALIC .			Title					

Incentives are subject to change and may be discontinued at the sole discretion of Duke Energy. Equipment must be installed and operable to be eligible for incentives. As Federal Energy Policy Law changes, equipment efficiency requirements are subject to change.



### See Page 4 of form for required efficiency levels and equipment eligibility

Make/Model # Scroll/Screw Type	# of Units	AHRI Tons/Unit	Full-load kW/ton*	Incentive \$/ton	IPLV kW/ton*	Incentive \$/ton	Building Type	Date Installed & Operable (mm/yy)	Total Incentive
McQuay / AGS160DSHNN-ER10	J	155.2	1.22	\$4.00	13.0	\$5.83	Library	7/09	\$1,525.62

The Equipment below is (check one):	
Early replacement of existing equipment of	or replacement of failed equipment must apply for Self Direct Custom program.

#### See Page 4 of form for required efficiency levels and equipment eligibility

Description	Make/Model #	# of Units	AHRI Tons/Unit	Full-load kW/ton*	Incentive \$/ton	IPLV kW/ton*	Incentive \$/ton	Building Type	Date Installed & Operable (mm/yy)	Total Incentive
Screw/Scroll Chiller Centrifugal Chiller										
Screw/Scroll Chiller Centrifugal Chiller										
Screw/Scroll Chiller Centrifugal Chiller										



### Thermal Storage Incentives

The Equipment below is (check one):  New Equipment / New Construction	
Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.	

Thermal Storage System Specifications		
Manufacturer of Thermal Storage Equipment		
Type of Thermal Storage	☐ Chilled Water	☐ Ice Bank ☐ Ice Harvester
Model Number		
Controls Manufacturer		
Control Strategy	Demand Limiting	☐Maximum Cooling Shift
Number of Thermal Storage Units		
Partial or Full Storage	Partial Storage	☐ Full Storage
Demand Shifted (kW)XX		
Storage Capacity (Ton Hours)		
Storage Capacity (Gallons If Applicable)		
Peak Cooling Load (Tons)		
Cooled Area (sq. ft.)		
Hours of Operations M-F		
Hours of Operations Sat		
Hours of Operations Sun		
Date Installed and Operable (mm/yy)		
Thermal Storage chiller Plant Description (Manufacturer, Tonnage, Ice Making kW/ton)		
Condenser Type	Air Cooled	☐ Water Cooled
Premium cost for Thermal Storage (Dollars)		
Annual Electrical Operating Cost with Storage (Dollars)		
Annual Savings as a result of Thermal Storage (Dollars)		
Simple Payback including Incentive (Years)		
Total Incentive (\$190/kW shifted)		
Conventional System Specifications (For Comparison Purposes)		
Chiller Plant Description (Manufacturer, type, tonnage, AHRI kW/ton		
Chiller Demand (kW)		
Annual Electrical Operating Cost with Conventional Cooling		

<sup>\*</sup>Thermal Storage Units with a >1MW load shift are not eligible for incentives under the Prescriptive Program but can be considered for custom incentives. The Custom application and process document are located on the Self Direct websites.

<sup>\*\*</sup> Average demand shifted during the peak demand timeframe of 10:00am to 6:00pm for summer months of May through September.



Equipment Requirements
Chillers Incentive Table & AHRI Rated Efficiency Requirements\*

이번 이가 발생하다는 그리고 있는데 이 이 사람이 없다.			
croll/Screw Type Chillers			
Full load kW/ton – EER	Base Incentive \$/ton	Part Load IPLV kW/ton – EER	Additional Incentive \$/ton
1,230 - 9.80	\$4.00	1.130 - 10.60	
1.230 - 9.80	\$4.00	1.010 - 11.90	\$5.83
1.230 - 9.80	\$4.00	0.890 - 13.50	\$12.07
1,230 - 9.80	\$4.00	0.810 - 14.80	\$15.75
1.142 10.50	\$12.50	1.046 - 11.50	
1.142 - 10.50	\$12,50	0.925 - 13.00	\$6.00
1.142 - 10.50	\$12.50	0.879 - 13.70	\$8.35
1.142 – 10.50	\$12.50	0.674 - 17.80	\$18.60
1.046 - 11.50	\$15.00	0.961 - 12.50	
1.046 - 11.50	\$15.00	0.847 14.20	\$5.70
1.046 - 11.50	\$15.00	0.795 - 15.10	\$8.30
1.046 - 11.50	\$15.00	0.618 19.40	\$17.15
ATER COOLED CHILLERS — < 1 stal Incentive = Base + Additional	ov tons		
rew/Scroll Type Chiller		D 11 LINITIONS FEB	A Atliticant Invention Citon
Full load kW/ton – EER	Base Incentive \$/ton	Part Load IPLV kW/ton - EER	Additional Incentive S/ton
0.790 – 15.20	\$2.50	0.620 - 19.40	\$1.50
0.790 15.20	\$2.50	0.590 - 20.30	\$3.50
0.790 15.20	\$2.50	0.550 - 21.80	\$5.50
0.790 – 15.20	\$2.50	0.510 - 23.50	\$7.50
0.790 15.20	\$2.50	0.470 - 25.50	\$7.50
0.710 - 16.90	\$7.50	0.630 - 19.00	\$3.50
0.710 – 16.90	\$7.50	0.560 - 21.40	\$5.00
0.710 – 16.90	\$7.50	0.530 - 22.60	\$6.50
0.710 - 16.90	\$7.50	0.500 - 24.00	\$8.50
0.710 16.90	\$7.50	0.460 - 26.10	\$10.00
0.710 – 16.90	\$7.50	0.430 - 27.90	\$10.00
0.630 - 19.00	\$10.00	0.560 - 21.40	\$3.00
0.630 – 19.00	\$10.00	0.500 – 24.00	\$4.50
0.630 19.00	\$10.00	0.470 - 25.50	\$6.00
0.630 19.00	\$10.00	0.440 - 27.30 0.410 - 29.30	\$7.50
0.630 – 19.00	\$10.00	0.410 - 29.30	\$9.00
0.630 19.00	\$10.00	0.360 - 31.60	0.00
entrifugal Type Chiller		2.550 04.40	
0.700 - 17.10	\$2.50	0.570 - 21.10	\$2.00
0.700 – 17.10	\$2.50	0.530 - 22.60	\$3.50
0.700 – 17.10	\$2.50	0.500 - 24.00	\$7.50
0.700 - 17.10	\$2.50	0.420 - 28.60	\$7.00
0.630 - 19.00	\$7.50	0.600 - 20.00	\$4.50
0.630 - 19.00	\$7.50	0.510 - 23.50	\$6.00
0.630 - 19.00	\$7.50	0.480 - 25.00	\$7.50
0.630 - 19.00	\$7.50	0.450 26.70	\$11.00
0.630 - 19.00	\$7.50	0.380 - 31.60	\$11,00
0.560 - 21.40	\$10.00	0.530 - 22.60	\$3.50
0.560 - 21.40	\$10.00	0.460 - 26.10	\$5.00 \$5.00
0.560 - 21.40	\$10.00	0.430 - 27.90	\$6.50
0.560 - 21.40	\$10.00	0.400 - 30.00	\$9.50
0.560 - 21.40	\$10.00	0.340 35.30	38.00

\*AHRI Standard 550/590
2003 Standard for Performance Rating of Water-Chilling Packages using the vapor compression cycle.



Screw/Scroll Type Chiller			
Full load kW/ton – EER	Base Incentive \$/ton	Part Load IPLV kW/ton - EER	Additional Incentive \$/ton
0.720 – 16.70	\$2.50	0.570 - 21.10	
0.720 16.70	\$2.50	0.540 - 22.20	\$1.50
0.720 16.70	\$2.50	0.500 24.00	\$3.50
0.720 16.70	\$2.50	0.470 - 25.50	\$5.00
0.720 - 16.70	\$2.50	0.430 27.90	\$7.00
0.650 - 18.50	\$7.50	0.570 - 21.10	
0.650 - 18.50	\$7.50	0.510 - 23.50	\$3.00
0.650 18.50	\$7.50	0.480 - 25.00	\$4.50
0.650 - 18.50	\$7.50	0.450 - 26.70	\$6.00
0.650 18.50	\$7.50	0.420 28.60	\$7.50
0.650 - 18.50	\$7.50	0.390 - 30.80	\$9.00
0.570 21.10	\$10.00	0.510 - 23.50	
0.570-21.10	\$10.00	0.450 - 26.70	\$3.00
0.570 21.10	\$10.00	0.430 - 27.90	\$4.00
0.570- 21.10	\$10.00	0.400 - 30.00	\$5.50
0.570- 21.10	\$10.00	0.370 - 32.40	\$7.00
0.570 21.10	\$10.00	0.340 35.30	\$8.50
Centrifugal Type Chiller			
0.630 19.00	\$2.50	0.510 - 23.50	
0.630 19.00	\$2.50	0.480 - 25.00	\$1.50
0.630 19.00	\$2.50	0.450 - 26.70	\$3.00
0.630 19.00	\$2.50	0.380 31.60	\$6.50
0.570 - 21.10	\$7.50	0.540 22.20	
0.570 - 21.10	\$7.50	0.460 - 26.10	\$4.00
0.570 - 21.10	\$7.50	0.430 - 27.90	\$5.50
0.570 - 21.10	\$7.50	0.400 - 30.00	\$7.00
0.570 - 21.10	\$7.50	0.340 - 35.30	\$10.00
0.510 - 23.50	\$10.00	0.480 - 25.00	
0.510 - 23.50	\$10.00	0.410 - 29.30	\$3.50
0.510 - 23.50	\$10.00	0.390 - 30.80	\$4.50
0.510 - 23.50	\$10.00	0.360 - 33.30	\$6.00
0.510 - 23.50	\$10.00	0.300 - 40.00	\$9.00

\*AHRI Standard 550/590 2003 Standard for Performance Rating of Water-Chilling Packages using the vapor compression cycle.



WATER COOLED CHILLERS>3	00 tons		
Total Incentive = Base + Additional			
crew/Scroll Type Chiller			
Full load kW/ton – EER	Base Incentive \$/ton	Part Load IPLV kW/ton – EER	Additional Incentive \$/ton
0.640 - 18,75	\$2,50	0.510 - 23.50	
0.640 - 18.75	\$2.50	0.480 - 25.00	\$1.50
0.640 - 18.75	\$2.50	0.450 - 26.70	\$3.00
0.640 18.75	\$2.50	0.420 - 28.60	\$4.50
0.640 18.75	\$2.50	0.380 - 31.60	\$6.50
0.580 - 20.70	\$7.50	0.510 - 23.50	
0.580 - 20.70	\$7.50	0.450 - 26.70	\$3.00
0.580 - 20.70	\$7.50	0.430 - 27.90	\$4.00
0.580 20.70	\$7.50	0.400 - 30.00	\$5.50
0.580 - 20.70	\$7.50	0.370 - 32.40	\$7.00
0.580 - 20.70	\$7.50	0.350 34.30	\$8.00
0.510 - 23.50	\$10.00	0.460 - 26,10	
0.510 - 23.50	\$10.00	0.400 30.00	\$3.00
0.510 - 23.50	\$10.00	0.380 - 31.60	\$4.00
0.510 - 23.50	\$10.00	0.360 - 33.30	\$5.00
0.510 23.50	\$10.00	0.330 - 36.40	\$6.50
0.510 - 23.50	\$10.00	0.310 - 38.70	\$7.50
Centrifugal Type Chiller			
0.580 20.70	\$2.50	0.470 25.50	
0.580 20.70	\$2.50	0.440 27.30	\$1.50
0.580 20.70	\$2.50	0.410 - 29.30	\$3.00
0.580 20.70	\$2.50	0.350 - 34.30	\$6.00
0.520 - 23.10	\$7.50	0.490 24.50	·
0.520 - 23.10	\$7.50	0.420 28.60	\$3.60
0.520 23.10	\$7.50	0.390 - 30.80	\$5.00
0.520 - 23.10	\$7.50	0.370 32.40	\$6.00
0.520 - 23.10	\$7.50	0.310 38.70	\$9.00
0.460 26.10	\$10.00	0.440 27.30	
0.460 - 26.10	\$10.00	0.370 - 32.40	\$3.50
0,460 - 26.10	\$10.00	0.350 - 34.30	\$4.50
0.460 – 26.10	\$10.00	0.330 36.40	\$5.50
0.460 - 26.10	\$10.00	0.280 - 42.90	\$8.00

\*AHRI Standard 550/590
2003 Standard for Performance Rating of Water-Chilling Packages using the vapor compression cycle.

1	Thermal Storage Incentives		
		Incentive	
	THERMAL STORAGE UNIT	\$95/kW shifted	



#### **Program Requirements**

#### **Equipment Eligibility**

- Duke Energy will use the AHRI database for verifying equipment efficiencies for all the chillers. If the equipment or matched set is not in the AHRI
  database, the manufacturer's technical fact sheets must be provided showing the efficiency level tested under AHRI conditions as described in AHRI
  standard 550/590. Equipment capacity (size) and efficiency must be based on AHRI design conditions. Full load efficiency rating (FL) and Integrated
  Part load Value (IPLV) must be provided for all chillers.
- Incentives for chillers will be paid based on the AHRI tons per unit.
- EER/COP and IPLV values shall include all connected loads, such as compressors, condenser fans, and control kW. Chiller components, such as motors
  and VFDs, are incented as part of the chiller package and are not independently eligible for prescriptive incentives during a chiller replacement
- Chiller incentives are only available for HVAC space cooling applications. All equipment installed must serve as a primary source of cooling for the facility. Industrial process cooling may qualify for a custom incentive.
- Chillers purchased and installed for backup or redundant systems are not eligible.
- Thermal Storage Units with a >1MW load shift are not eligible for incentives under the Prescriptive Program but can be considered for
- custom incentives.
- All equipment must be new to be eligible for incentives. Used equipment is not eligible for incentives.

#### Incentive Eligibility

- · Incentives are only available to customers on a Duke Energy Ohio non-residential rate.
- . Duke Energy Customers who purchase electric generation from an alternative supplier are eligible to participate.
- Incentive will not be paid until eligible equipment has been installed, is available to operate, and verification has been completed by Duke Energy staff as noted in the Term & Conditions stated below.
- · Duke Energy reserves the right to revise incentive levels and/or qualifying efficiency levels at any time.
- Customer may assign the incentive to the vendor who installed/supplied the equipment. The customer's signature is required in the
  Payment Information section on page 1 of this form to assign the incentive to the vendor. Customer agrees that such an action constitutes an irrevocable
  assignment of the incentive. This assigned incentive must reduce the purchase price paid for the equipment by an equivalent amount.
- Leased equipment is eligible for incentives providing the equipment meets the program requirements and the customer provides the
  required documentation noted on the Incentive Application Process page of this application.
- Any equipment which, either separately or as part of a project, has or will receive an incentive from any other Duke Energy program
  is ineligible.
- · In no case will Duke Energy pay an incentive above the actual cost of the new equipment.
- Incentive recipient assumes all responsibilities for any tax consequences resulting from Duke Energy incentive payment.
- To qualify for Duke Energy incentives, applicants who provide their social security number as their federal tax identification number for tax purposes must sign and return the "Customer consent to release personal information" form ("Consent Form") along with the application. Incentive applications are processed by a 3<sup>rd</sup> party vendor. The 3<sup>rd</sup> party vendor is responsible for mailing the 1099 form at the end of the calendar year for tax filing. Duke Energy and the 3<sup>rd</sup> party vendor have signed a confidentiality agreement to protect your personal information. If your social security number is your federal tax ID number and you elect not to sign the Consent Form, please do not send Duke Energy the application, as you will not be qualified to participate in the incentive program.

#### **Terms and Conditions**

I certify that this premise is served by Duke Energy (or an affiliate of Duke Energy), that the information provided herein is accurate and complete, and that I have purchased and installed the high efficiency equipment (indicated herein) for the business facility listed herein and not for resale. Attached is an itemized invoice for the indicated installed equipment. In understand that the proposed incentive payment from Duke Energy is subject to change based on verification and Duke Energy approval. I agree to Duke Energy verification of both the sales transaction and equipment installation which may include a site inspection from a Duke Energy representative or Duke Energy agent. I understand that I am not allowed to receive more than one incentive from Duke Energy on any piece of equipment. I also understand that my participation in the program may be taxable and that my company is solely responsible for paying all such taxes. I hereby agree to indemnify, hold harmless and release Duke Energy and it's affiliates from any actions or claims in regards to the installation, operation and disposal of equipment (and related materials) covered herein including liability from an incidental or consequential damages. Duke Energy does not endorse any particular manufacturer, product or system design within these programs; does not expressly or implicitly warrant the performance of installed equipment (Contact your contractor for details regarding equipment warrantics), and is not liable for any damage caused by the installation of the equipment nor for any damage caused by the malfunction of the installed equipment.



#### **Incentive Application Instructions**

#### IMPORTANT NOTICE

Delays in processing incentive payments will occur if required documentation is not included with completed application(s),

- Contact Duke Energy toll free at 866-380-9580 to confirm customer eligibility. Applications are available for download at www.duke-energy.com.
- 2. Review program and equipment requirements on the incentive application,
- 3. Purchase and install eligible energy-efficient equipment.
- Complete and submit application for equipment that was installed after 1/1/2008.
- 5. The following items must be included to verify projects. If they are not included, it will delay payment of incentive.
  - A. Itemized invoice for all equipment installed to include:
    - a. Equipment cost
    - b. Quantity per equipment type installed
    - c. Model # for each equipment type
    - d. Manufacturer's data sheet for each equipment model #.
  - B. Make sure the account number provided on the cover page (customer information section) is associated with the location where the equipment was installed. If the account # does not match the address where the equipment was installed, the application will be rejected as ineligible.
  - C. Provide required tax ID# for payee.
  - D. Customer must sign and date the application after reviewing the Terms and Conditions, if customer wishes to assign payment of the incentive directly to the vendor, the customer should circle the appropriate payce in the Payment Information section of the application and sign their name to authorize payment.
- 6. Duke Energy may require site verification of projects that have been self-installed, prior to payment of incentive.
- 8. Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-419-5572.
- 8. A percentage of equipment installations will be site verified for quality assurance purposes. Once selected, a Duke Energy representative will contact the customer to arrange for the inspection. All incentive payments related to the project will be withheld until site verification is complete. There is no charge to the customer for these inspections.



# Mereantile Self Direct Incentive Program Requirements for Vendor Participation

#### Program Overview

- Duke Energy offers it's eligible non-residential customers the opportunity to increase profitability through energy cost savings and contribute to a cleaner environment by participating in our Mercantile Self Direct Incentive Program.
- Under the Duke Energy Mercantile Self Direct Incentive Program, Vendor is defined as any third party who:
  - Promotes the sale and installation of the high efficiency equipment for the customer. The Vendor will ensure that the eligible equipment is installed and operating before submitting the application or assisting the customer in completing the application.
  - Is responsible for the product sale only and is not required to ensure installation of the eligible equipment.
- All license requirements, if any, are solely the Vendor's
  responsibility. Participating Vendors include equipment contractors,
  equipment Vendors, equipment manufacturers and distributors,
  energy service companies, etc. The typical Vendor role is to
  contact/solieit eligible customers building new or retrofitting existing
  facilities and encourage the installation of the energy-efficient
  equipment offered in Duke Energy's program.
- Incentives are paid directly to customers unless the customer assigns
  the incentive to the Vendor. The assigned incentive must reduce the
  purchase price paid for the equipment by an equivalent amount.
  Incentives are taxable to the entity who receives the rebate check.
  Rebates greater than \$600 will be reported to the IRS unless
  documentation of tax exempt status is provided.
- Vendors can sign up to be on Duke Energy's Web site as a
  participating Vendor and be added to Duke Energy's e-mail
  distribution by faxing the Vendor Participation Agreement (VPA) to
  513-419-5572 or emailing to SelfDirect@duke-energy.com.

#### Guidelines for Vendor Activities

 Vendors shall sign and return the attached VPA to Duke Energy prior to soliciting customer participation or when submitting an application. Rebate payments will not be released to a Vendor unless a signed VPA is on file.

Vendors shall not misrepresent the nature of their role in the program. In particular, Vendors shall not state or imply to customers, or any persons, that the Vendor is employed by or working on Duke Energy's behalf.

- Vendors may not represent to customers that Duke Energy endorses their specific products or services. Duke Energy does not endorse specific products, services, or companies – only energy-efficient technologies.
- Vendors may advise customers of their option to have Duke Energy
  make their rebate check(s) payable to the Vendor if the customer's
  rebate amount is being deducted from the total sale price in advance.
  The customer must complete and sign the Payment Release
  Authorization section of the Mercantile Self Direct Incentive
  Program Application.
- Vendors may use the words "Duke Energy's Mercantile Self Direct Incentive Program" in promotional materials or advertisements.
   Vendors may use the name Duke Energy in a text format to describe the Mercantile Self Direct Incentive Program, but are not permitted to use Duke Energy's logos.
- For Vendors who properly install the qualifying equipment, the equipment shall be installed and operating prior to an application being submitted. A percentage of each Vendor's installations will be subject to inspection by Duke Energy for verifying that the equipment is installed and operating. Vendors demonstrating high failure rates (based on a statistically significant sample) will have 100% of subsequent jobs inspected or may bave their participation in the Mercantile Self Direct Incentive Program revoked by Duke Energy in it's sole discretion.
- Vendors shall provide customers with applicable equipment warranty
  information for all measures installed. Vendors shall provide the
  required documentation for customers to apply for the rebate
  (invoices with model numbers and quantities, specification sheets for
  installed equipment, etc.) and assist customers in filling out the
  application.
- Vendors shall comply with all applicable local, state, and federal laws and codes when performing installation and related functions.
- Duke Energy reserves the right to revoke a Vendor's participation in Mercantile Self Direct Incentive Program if, in Duke Energy's sole judgment, the Vendor fails to comply with the program's guidelines and requirements.
- Mercantile Self Direct Incentive Program offerings may be modified or terminated without prior notice. Check Duke Energy's Web site for current program status.

For more information, call 1-866.380.9580 or visit www.duke-energy.com.



### Mercantile Self Direct Rebate Program

Technology	Responsible for sales and not installs*	Responsible for sales and Installation*	Technology	Responsible for sales and not installs*	Responsible for sales and Installation*
Lighting			Thermal Storage		
Heating Ventilation & Cooling			Pumps/Motors/VFD's		
Food Service			Chillers		
Water Heating			Refrigeration		
Process Equipment (air compressors, injection molding, etc.)			Window Film		
<ul> <li>Check all that apply</li> </ul>					
Vendors who wish to be listed on file at Duke Energy in order I have read and understand the set forth therein. By signing this knowledge. I hereby represent a information concerning my customer's participation in the understands the requirements p	Mercantile Self Direct In s agreement. I agree to prand warrant that the Tax tomer, including but not Mercantile Self Direct In	e incentive payments. Far centive Program Require rovide my customers with ID and Vendor Tax Statu limited to Duke Energy s centive Program, Further	x form to 513-419-5572 o ements for Vendor Particip h information and docume as provided below are true service account informatio	r email to <u>SchDirect@du</u> pation, and I agree to con entation that is true and a and accurate. I agree tha n, will be used for the so	tke-energy.com.  The property of the best of my the tany confidential the purpose of facilitating the purpose of facilitating the
Vendor Federal Tax ID Numbe	er .				
To qualify for Duke Energy ine sign and return the "Customer c by a third-party vendor. The thi third-party vendor have signed you elect not to sign the Conser	consent to release persone rd-party vendor is respon confidentiality agreement	I information" form ("Co sible for mailing the 109 to protect your personal	onsent Form") along with 9 form at the end of the ca information. If your socia	the application. Incentivalendar year for tax filing at security number is you	e applications are processed . Duke Energy and the r federal tax ID number and
Vendor Tax Status	Corporation	☐ Individual/Sole Pro	prietor Partners	nip 🔲	Other
	1	I	107.4.11		· · · · · · · · · · · · · · · · · · ·
Contact me via	] Phone	E-Mail	☐ Mail		
Company Name	Value - IV				
Mailing Address					
City, State, Zip					
Phone/Fax					
Primary E-mail Address					
Secondary E-mail Address					
Vendor Signature					
Title					
Print Name					
Date					
		1			

For more information, call 1-866-380-9580 or visit www.duke-energy.com.

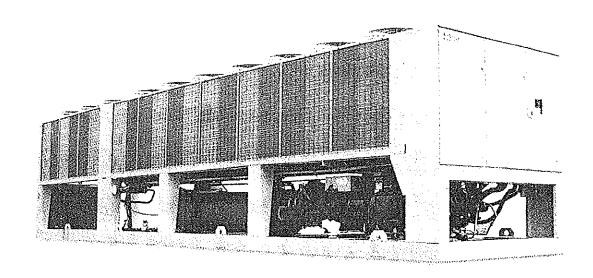




## Air Cooled Screw Compressor Chillers

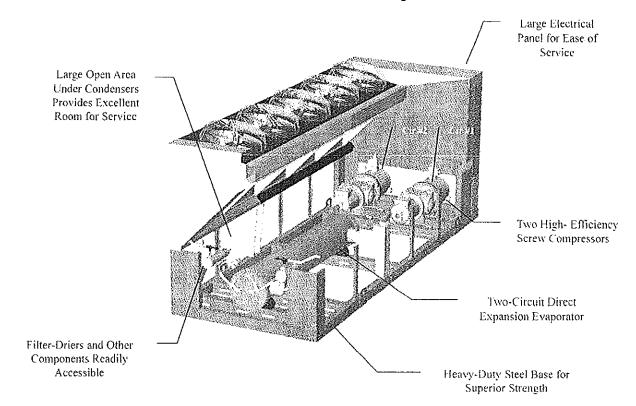
Catalog 610-1

Models AGS140-200D Packaged Models AGS140-210D Remote Evaporator 140-200 tons (490-703 kW)

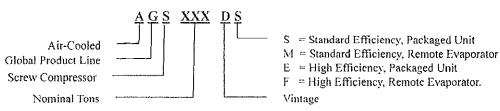




#### Cutaway View of an AGS-170DS Chiller Typical of Models AGS 140D through AGS 210D







#### HAZARD IDENTIFICATION INFORMATION

#### **∆CAUTION**

Cautions indicate potentially hazardous situations, which can result in personal injury or equipment damage if not avoided.

### **Performance Data**

### Standard Efficiency

Table 8, Performance, Inch-pound Units

			L					Amb	ient Air	Tempe	rature	(deg F)			_		
AGS Unit	Fan Power	LWT		75			85			95			105			115	
Size	(kW)	(°F)	Unit	PWR	Unit	Unit	PWR	Unit	Unit	PWR	Unit	Unit	PWR	Unit	Unit	PWR	Unit
0120	11117		Tons	kWi	EER	Tons	kWi	EER	Tons	kWi	EER	Tons	kWi	EER	Tons	kWi	EER
		40	143.7	138.9	12.4	135.1	148.9	10.9	126.4	160.2	9.5	117.5	172.6	8.2	108.5	186.2	7.0
		42	149.5	141.8	12.7	140.6	151.8	11.1	131.6	163.1	9.7	122.5	175.5	8.4	113.3	189.2	7.2
140DS	18	44	155.5	144.7	12.9	146.3	154.8	11.3	137.0	166.1	9.9	127.6	178.6	8.6	118.1	192.2	7.4
14002	10	46	161.5	147.8	13.1	152,1	157.9	11.6	142.5	169.2	10.1	132.8	181.7	8.8	123.0	195.4	7.6
		48	167.7	151.0	13.3	158.0	161.0	11.8	148.1	172.3	10.3	138.1	184.9	9.0	128.0	198.6	7.7
		50	174.1	154.3	13.5	164.0	164.3	12.0	153.8	175.6	10.5	143.5	188.2	9.2	133.1	201.9	7.9
		40	163.4	158.6	12.4	153.5	170.1	10.8	143.3	183.0	9.4	133.1	197.2	8.1	122.9	212.6	6.9
		42	169.9	162.0	12.6	159.6	173.6	11.0	149.2	186.4	9.6	138.7	200.7	8.3	128.1	216.2	7.1
160DS	18	44	176.5	165,6	12.8	165.9	177.1	11.2	155,2	190.0	9.8	144.4	204.3	8.5	133.4	219.9	7.3
10003	,,	46	183.3	169.3	13.0	172.4	180.8	11.4	161.3	193.8	10.0	150.1	208.0	8.7	138.9	223.6	7.5
		48	190.2	173.1	13.2	179.0	184.7	11.6	167.5	197.6	10.2	156.0	211.9	8.8	144.4	227.5	7.6
		50	197.2	177.0	13.4	185.6	188.6	11.8	173.9	201.6	10.4	162.0	215.9	9.0	150.1	231.5	7.8
		40	171.8	171.8	12.0	161.5	183.7	10,5	150.9	197,1	9.2	140.3	212.1	7.9	129.6	228.6	6.8
		42	178.7	175.5	12.2	168.1	187.4	10.8	157.3	200.8	9.4	146.3	215.8	8.1	135.3	232.3	7.0
170DS	18	44	185.8	179.4	12.4	174,9	191.2	11.0	163.7	204.6	9.6	152.4	219.6	8.3	141.0	236.2	7.2
17005	10	46	193.1	183.4	12.6	181.8	195.2	11.2	170.3	208.6	9.9	158.6	223.6	8.5	146.9	240.2	7.3
	Ī	48	200.5	187.6	12.8	188.9	199.3	11.4	177.0	212.7	9.9	165.0	227.7	8.7	152.9	244.2	7.5
	Ī	50	208.1	191.8	13.0	196.1	203.6	11.6	183.9	217.0	9.9	171.5	231.9	8.9	159.0	248.5	7.7
		40	175.1	174.6	12.0	169.9	191.6	10.6	164.3	211.6	9.3	158.2	235.0	8.1	151.8	262.1	7.0
		42	181.3	177.8	12.2	176.0	194.8	10.8	170.3	214.9	9.5	164.2	238.5	8.3	157.6	265.8	7.1
		44	187.6	181.1	12.4	182.3	198.2	11.0	176.5	218.4	9.7	170.2	242.2	8.4	163.6	269.6	7.3
190DS	21.6	46	194.1	184.4	12.6	188.6	201.6	11.2	182.7	222.0	9.9	176.4	245.9	8.6	169.6	273.5	7.4
	<u> </u>	48	200 6	187.9	12.8	195.1	205.1	11.4	189.1	225.6	10.1	182.7	249.7	8.8	175.8	277.5	7.6
		50	207.2	191.5	13.0	201.7	208.8	11,6	195.6	229.4	10.2	189.0	253.6	8.9	182.1	281.8	7.8
		40	187.5	185.1	12.2	181.9	203.0	10.8	175.9	224.1	9.4	169.4	248.8	8.2	162.5	277.3	7.0
- 1	ľ	42	194.1	188.4	12.4	188.5	206.4	11.0	182.3	227.6	9.6	175.8	252.5	8.4	168.7	281.2	7,2
		44	200.8	192.0	12.5	195.1	209.9	11.2	188.9	231.3	9.8	182.2	256.4	8.5	175.1	285.3	7.4
200D\$	21,6	46	207,7	195.6	12.7	201.9	213.7	11.3	195.6	235.2	10.0	188.8	260.3	8.7	181.6	289.5	7.5
	f	48	214.6	199.3	12.9	208.7	217.5	11.5	202.3	239.0	10.2	195.5	264.5	8.9	188.1	293.8	7.7
}	ŀ	50	221.9	203.3	13.1	215.8	221,4	11.7	209.3	243.1	10.3	202.3	268.7	9.0	194.8	298.3	7.8

- Rated in accordance with ARI Standard 550/590-2003.
   Ratings based on R-134a, evaporator fouling factor of 0.0001, 10-degree Delta-T, evaporator flow of 2.4 gpm/ton and sea level allflude.

  3. Interpolation is allowed, extrapolation is not permitted. Consult McQuay for performance outside the cataloged ratings.

  4. KW and EER are for the entire unit, including compressors, fan motors and control power.

Table 9, Part Load Performance

UNIT	% LOAD	CAPACITY	POWER	EER	IPLV	
SIZE	/\$ LOAD	TONS	kWi			
	100	137.0	166.1	9.9		
140DS	75	102.8	102.7	12.0	12.9	
14003	50	68.5	59.3	13.9	12.5	
	25	34,3	32.2	12.8		
	100	155.2	190.0	9.8	,	
160DS	75	116.4	118.2	11.8	13.0	
10003	50	77.6	65.4	14.2	10.0	
	25	38.8	35.7	13.1		
	100	163.7	204.6	9.6		
170DS	75	122.8	126.5	11.6	12.5	
11003	50	81.8	73.3	13.4	12.5	
	25	40.9	39.4	12.5		
	100	176.5	217.3	9.7		
190DS	75	132.4	140.4	11.3	12.5	
19003	50	88.3	78.2	13.5	12.5	
	25	44.1	42.1	12.6		
· · · · · · · · · · · · · · · · · · ·	100	188.9	231.3	9.8		
200DS	75	141.7	149.8	11.4	12.5	
20002	50 94.5	83.3	13.6	12.3		
	25	47.2	44.9	12.6		

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NOTES:
1. Rated in accordance with ARI Standard 550/590-2003.



# SERVICES DEPARTMENT WEST CHESTER TOWNSHIP, OHIO

DATE: June 5, 2012

RE: West Chester Township Library Confirmation Cost Information for Lighting/Pumps/Motors/Chillers Application ID 114937

To Whom It May Concern:

This letter is to confirm that for the renovation to the HVAC mechanical systems of the West Chester Township Library for the MSD Custom rebate applications, the chiller was installed with a minimum unit cost listed below.

Description/Model#	Quantity	Price/Fixture	Amount	
McQuay / AGS160DSHNN-ER10	1	\$67,200.00	\$67,200.00	

Total Equipment Cost: \$67,200.00

Sincerely yours,

Tim Franck

West Chester Community Services Director