



**Case No.: 13 - 0044 -EL-EEC**

Mercantile Customer: Kohl's Department Stores, Inc.

Electric Utility: The Cleveland Electric Illuminating Company

Program Title or Description: HVAC Retrofit, Lighting Upgrade, Motor Upgrade (VFD)

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](mailto:ee-pdr@puc.state.oh.us).

## Section 1: Mercantile Customer Information

Name: Kohl's Department Stores, Inc.

Principal address: N56 W17000 Ridgewood Drive, Menomonee Falls, WI 53051

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

Name and telephone number for responses to questions: Marcy Schaefer, 262-703-5239

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

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

## Section 2: Application Information

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

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

B) The electric utility is: The Cleveland Electric Illuminating Company

C) The customer is offering to commit (check any that apply):

- ☐ Energy savings from the customer's energy efficiency program. (Complete Sections 3, 5, 6, and 7.)
- ☐ Capacity savings from the customer's demand response/demand reduction program. (Complete Sections 4, 5, 6, and 7.)
- ☒ Both the energy savings and the capacity savings from the customer's energy efficiency program. (Complete all sections of the Application.)

### Section 3: Energy Efficiency Programs

A) The customer's energy efficiency program involves (check those that apply):

- ☒ Early replacement of fully functioning equipment with new equipment. (Provide the date on which the customer replaced fully functioning equipment, and the date on which the customer would have replaced such equipment if it had not been replaced early. Please include a brief explanation for how the customer determined this future replacement date (or, if not known, please explain why this is not known)). **If Checked, Please see Exhibit 1 and Exhibit 2**
- ☐ Installation of new equipment to replace equipment that needed to be replaced. The customer installed new equipment on the following date(s): \_\_\_\_\_.
- ☐ Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s): \_\_\_\_\_.
- ☐ 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: 655316 kWh (see Exhibit A)

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

Annual savings: \_\_\_\_\_ kWh

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

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

Annual savings: \_\_\_\_\_ kWh

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

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

## Section 4: Demand Reduction/Demand Response Programs

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

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

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

See Exhibit A

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

132 ~~132~~ (See Exhibit A)

## **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 \$ 30.132. (Rebate shall not exceed 50% project cost. Attach documentation showing the methodology used to determine the cash rebate value and calculations showing how this payment amount was determined.)

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

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

OR

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

OR

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

### Section 6: Cost Effectiveness

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

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

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

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

The electric utility's avoided supply costs were \_\_\_\_\_.

Our program costs were \_\_\_\_\_.

The incremental measure costs were \_\_\_\_\_.

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

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

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

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

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

## **Section 7: Additional Information**

Please attach the following supporting documentation to this application:

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



# Ohio | Public Utilities Commission

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

Case No.: 13-0044  
12 0100 -EL-EEC

State of Ohio :

Marcy

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

1. I am the duly authorized representative of:

Kohl's Department Stores, Inc

[insert customer or EDU company name and any applicable name(s) doing business as]

2. I have personally examined all the information contained in the foregoing application, including any exhibits and attachments. Based upon my examination and inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete.

[Signature] Energy Manager, Kohl's  
Signature of Affiant & Title

Sworn and subscribed before me this 26 day of September, 2011 Month/Year

[Signature]  
Signature of official administering oath

Geraldine DePalma  
Print Name and Title

My commission expires on 4/14/12

COMMONWEALTH OF PENNSYLVANIA  
NOTARIAL SEAL  
GERALDINE DePALMA, Notary Public  
Upper Moreland Twp., Montgomery County  
My Commission Expires April 14, 2012  
[Signature]

<b>RWW ID#</b>	<b>Kohls #</b>	<b>Address</b>	<b>City</b>	<b>State</b>	<b>Zip</b>
82749	10254	17555 Southpark Center	Strongsville	OH	44136
82761	10242	6860 Ridge Road	Parma	OH	44129
45344 / 65493	10238	3221 Westgate Mall	Fairview Park	OH	44126
61446 / 54601	10464	35906 Detroit Road	Avon	OH	44011
65495	10252	6245 Wilson Mills Road	Highland Heights	OH	44143

Customer Legal Entity Name: Kohl's Department Stores, Inc.

Site Address: Kohls #10238  
Principal Address: 3221 Westgate Mall

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Kohls #10238 HVAC	Kohl's Department Store completed a comprehensive HVAC efficiency upgrade to Store #10238. Project consisted of a one for one replacement of (8) inefficient RTU's with new, efficient units that are AHRI certified. There was also (1) additional unit that was installed that did not replace any existing unit. This single unit is also AHRI certified.	See "Kohls #10238 - HVAC Engineering Calculations.xlsx" and "Kohls #10238 - Custom Application.xls".	Potential replacement date would have been 2012. There were 2.5 years of service estimated to exist in the replaced equipment.	N/A
2	Kohls #10238 Motors & Drives	Purchased and installed (10) new 7.5HP Yaskawa VFD on HVAC unit. A VFD was not previously installed on HVAC system. (Dept. 65493)	See "Kohls #10238 - Motors and Drives Application.xls" and "Kohls #10238 - 7.5 HP VFD Calc.pdf".	N/A	VFD was added to HVAC system which did not previously have one installed.

## Exhibit 2

Customer Legal Entity Name: Kohl's Department Stores, Inc.

**Site Address:** Kohls #10238

**Principal Address:** 3221 Westgate Mall

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2010	1,075,500	1,075,500	317,889 1,075,500
<b>Average</b>	<b>1,075,500</b>	<b>1,075,500</b>	<b>696,695</b>

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>
1	Kohls #10238 HVAC	01/28/2011	\$123,611	\$61,805	283,283	283,283	52	\$22,663	\$16,997
2	Kohls #10238 Motors & Drives	01/28/2011	\$16,522	\$8,261	60,000	60,000	11	\$2,250	\$1,688
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
Total			\$140,133		343,283	343,283	63	\$24,913	\$18,685

**Docket No. 13-0044**

**Site:** 3221 Westgate Mall

## Notes

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

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

**Commitment  
Payment  
\$**

**\$0**

### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	283	\$ 308	\$ 87,330	\$ 2,025	\$16,997		\$ 19,022	<b>4.6</b>
2	60	\$ 308	\$ 18,497	\$ 2,025	\$1,688		\$ 3,713	<b>4.98</b>
<b>Total</b>	<b>343</b>	<b>\$ 308</b>	<b>105,827</b>	<b>4,050</b>	<b>\$18,685</b>	<b>\$0</b>	<b>22,735</b>	<b>4.7</b>

#### Notes

(A) From Exhibit 2, = kWh saved / 1000

(B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices. This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).

(C) = (A) \* (B)

(D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.

(E) This is the amount of the cash rebate paid to the customer for this project.

(F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.

(G) = (D) + (E) + (F)

(H) = (C) / (G)

**Kohl's Department Stores, Inc. ~ Kohls #10238**  
**Docket No. 13-0044**

**Site:** 3221 Westgate Mall

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## Mercantile Customer Program - Custom Project Rebate Calculator

<b>Project Name and Number:</b>	Kohl's Department Stores, Inc.
<b>Site Name:</b>	<b>Kohls #10238</b>
<b>Completed by (Name):</b>	<b>Marcello Crestani</b>
<b>Date completed:</b>	<b>5/5/2010</b>

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
RTU HVAC	283,283	22662.64
<b>Total Project Energy Savings kWh</b>	<b>283,283</b>	
<b>Total Custom Prescriptive Rebate Amount \$</b>	<b>\$</b>	<b>22,662.64</b>

	Notes about this rebate calculation:

Client Kohls  
Address 3221 Westgate Mall

RAT # 45344

Existing HVAC

RTU #	Model #	Ton	EER/SEER	AHRI Cert #	kW/Ton
1	York D1EG240N24046FDC	20	9.5		1.26
2	York D1EG240N24046FDC	20	9.5		1.26
3	York D1EG240N24046FDC	20	9.5		1.26
4	York D1EG240N24046FDC	20	9.5		1.26
5	York D1EG240N24046FDC	20	9.5		1.26
6	York D1EG240N24046FDC	20	9.5		1.26
7	York D1EG240N24046FDC	20	9.5		1.26
8	York D1EG240N24046FDC	20	9.5		1.26

Total Existing kW 71.79

HVAC Operating Hours 5252

Total Existing kWh 377038.3158

New HVAC

RTU #	Model #	Ton	EER/SEER	AHRI Cert #	kW/Ton
1	ZR240S24C4DKR1	20	12.1	1429021	0.99
2	ZJ240S24Q4DKR1	20	11.6	1429008	1.03
3	ZJ240S24Q4DKR1	20	11.6	1429008	1.03
4	ZR240S24C4DKR1	20	12.1	1429021	0.99
5	ZR240S24C4DKR1	20	12.1	1429021	0.99
6	ZJ240S24Q4DKR1	20	11.6	1429008	1.03
7	ZJ240S24Q4DKR1	20	11.6	1429008	1.03
8	ZR240S24C4DKR1	20	12.1	1429021	0.99
9	ZJ150S20Q4DKR5	12.5	12.2	3568395	0.98

Total New kW 19.83

HVAC Operating Hours 5252

Total New kWh 104171.9008

Coincidence Factor Reduction (Compressor Run-time) 10417.19 10%

Total New kWh (w/ Coincidence Factor) 93754.71

TOTAL kWh REDUCTION 283283.61





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<b>Project Name:</b>	Kohls #10238
<b>Site Name:</b>	3221 Westgate Mall, Fairview, OH 44126
<b>Completed by (Name):</b>	Marcello Crestani
<b>Date completed:</b>	5/5/2010

### Variable Frequency Drive Rebate Form

VFD and Controlled Motor Nameplate DATA											Total Motor Incentive <sup>1</sup> \$
Motor Application	VFD Manufacturer	VFD Model Number	Unique Motor ID(s)	Motor Location	Enclosure type: TEFC or ODP	Annual Hours of Operation <sup>2</sup>	Load Factor (LF) <sup>3</sup>	Motor Model Number	Motor HP	Motor Nominal Efficiency	
HVAC	Emerson	HSKD		RTU	TEFC	5356	0.8	Unknown	7.5	80%	2,250
Incentive through 10/11/2011 @ \$30/hp											2,250

(1) VFD incentives are calculated at a flat rate of \$30 per horsepower controlled, up to a maximum of 500 hp controlled per VFD.

When a single VFD is used to control two motors in a lead/lag (standby, redundant) configuration, use only the horsepower rating of one motor to figure controlled horsepower. For instance, if a single VFD controls two 30hp motors with only one operating at a time, the incentive calculation should be based on 30 hp: 30hp x \$30/hp = \$900.

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

(3) For all motor and VFD applications, use the Load Factor (LF) default value of 0.80, unless data is available to support the use of a motor-specific LF other than 0.80. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Customer Legal Entity Name: Kohl's Department Stores, Inc.  
Site Address: Kohl's #10242  
Principal Address: 6860 Ridge Road

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Kohl's #10242	Energy Saving Retrofit of HVAC RTU's	See "Kohls #10242 - HVAC Engineering Calculations.xls".	n/a	N/A

## Exhibit 2

Customer Legal Entity Name: Kohl's Department Stores, Inc.

**Site Address:** Kohl's #10242

**Principal Address:** 6860 Ridge Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2011	1,164,480	1,164,480	1,179,299
<b>Average</b>	<b>1,164,480</b>	<b>1,164,480</b>	<b>1,179,299</b>

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>
1	Kohl's #10242	08/30/2011	\$2,575	\$1,288	43,620	43,620	8	\$3,490	\$1,288
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
		Total	\$2,575		43,620	43,620	8	\$3,490	\$1,288

**Docket No. 12-0100**

**Site:** 6860 Ridge Road

## Notes

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

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

**Commitment  
Payment  
\$**

**\$0**

### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	44	\$ 308	\$ 13,447	\$ 4,050	\$1,288		\$ 5,338	2.5
<b>Total</b>	<b>44</b>	<b>\$ 308</b>	<b>13,447</b>	<b>4,050</b>	<b>\$1,288</b>	<b>\$0</b>	<b>5,338</b>	<b>2.5</b>

#### Notes

- (A) From Exhibit 2, = kWh saved / 1000
- (B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices. This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).
- (C) = (A) \* (B)
- (D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.
- (E) This is the amount of the cash rebate paid to the customer for this project.
- (F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.
- (G) = (D) + (E) + (F)
- (H) = (C) / (G)

**Kohl's Department Stores, Inc. ~ Kohl's #10242**  
**Docket No. 12-0100**

**Site:** 6860 Ridge Road



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## Mercantile Customer Program - Custom Project Rebate Calculator

<b>Project Name and Number:</b>	Kohl's #10242
<b>Site Name:</b>	Kohl's #10242
<b>Completed by (Name):</b>	Marcello Crestani
<b>Date completed:</b>	9/22/2011

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
HVAC Replacement	43,620	3489.62
<b>Total Project Energy Savings kWh</b>	<b>43,620</b>	
<b>Total Custom Prescriptive Rebate Amount \$</b>		<b>\$ 3,489.62</b>

### Notes about this rebate calculation:

See HVAC Savings Worksheet attached with application

# HVAC SAVINGS WORKSHEET

Kohl's #10242  
6860 Ridge Road  
Parma, OH 44129

Baseline: ASHRAE 90.1 (2004) PRE 1/1/2010	
0-5.4 Tons	13 SEER (1.02 kW/ton)
5.4-11.25 Tons	10.3 (1.17 kW/ton)
11.25-20 Tons	9.7 (1.24 kW/ton)
20-60 Tons	9.5 (1.263 kW/ton)

*\*Equivalent Full Load Hours  
per ASHRAE standards for Chicago, IL region.*

**\*EFLH: 1090**

## system information

Unit No.	Make	Model	Ton	EER	Baseline (ASHRAE) kW/ton	Installed Equipment kW/ton
AC-1	York	ZR240S24C4DKV1	20	12.1	1.26	0.99
AC-2	York	ZR240S24C4DKV2	20	12.1	1.26	0.99
AC-3	York	ZR240S24C4DKV3	20	12.1	1.26	0.99
AC-4	York	ZJ180S24C4DKV1	15	12.4	1.24	0.97
AC-5	York	ZJ180S24C4DKV2	15	12.4	1.24	0.97
AC-6	York	ZJ240S24Q4DKV1	20	11.6	1.26	1.03
AC-7	York	ZJ240S24Q4DKV2	20	11.6	1.26	1.03
AC-8	York	ZJ240S24Q4DKV3	20	11.6	1.26	1.03
AC-9	York	ZJ120S0Q4DKV5	10	12.2	1.17	0.98
<b>total tons:</b>			<b>160</b>			

## kW and kWh initial savings calcs

Baseline (kW)	Installed Equipment (kW)	kW savings	baseline kWh	installed kWh	initial kWh savings
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
18.6	14.5	4.1	20,274.00	15,822.58	4,451.42
18.6	14.5	4.1	20,274.00	15,822.58	4,451.42
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
11.7	9.8	1.9	12,753.00	10,721.31	2,031.69
200.46	160.44	40.02	218501.40	174881.15	<b>43,620.25</b>

Customer Legal Entity Name: Kohl's Department Stores, Inc.  
Site Address: Kohl's #10252  
Principal Address: 6245 Wilson Mills Road

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Kohl's #10252	Purchased and installed (8) new 7.5HP Yaskawa VFD on HVAC unit. A VFD was not previously installed on HVAC system.	See "Kohls #10252 - Motors and Drives Application.xls" and "Kohls #10252 - 7.5 HP VFD Engineering Calculation.pdf".	VFD was added to HVAC system which did not previously have one installed.	N/A



## Exhibit 2

Customer Legal Entity Name: Kohl's Department Stores, Inc.

**Site Address:** Kohl's #10252

**Principal Address:** 6245 Wilson Mills Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2010	968,800	968,800	43,792 968,800
<b>Average</b>	<b>968,800</b>	<b>968,800</b>	<b>506,296</b>

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>
1	Kohl's #10252	02/02/2011	\$14,506	\$7,253	48,000	48,000	8	\$1,800	\$1,350
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
		Total	\$14,506		48,000	48,000	8	\$1,800	\$1,350

**Docket No. 12-0100**

**Site:** 6245 Wilson Mills Road

## Notes

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

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

**Commitment  
Payment  
\$**



**\$0**

### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	48	\$ 308	\$ 14,797	\$ 4,050	\$1,350		\$ 5,400	2.7
<b>Total</b>	<b>48</b>	<b>\$ 308</b>	<b>14,797</b>	<b>4,050</b>	<b>\$1,350</b>	<b>\$0</b>	<b>5,400</b>	<b>2.7</b>

#### Notes

- (A) From Exhibit 2, = kWh saved / 1000
- (B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices. This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).
- (C) = (A) \* (B)
- (D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.
- (E) This is the amount of the cash rebate paid to the customer for this project.
- (F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.
- (G) = (D) + (E) + (F)
- (H) = (C) / (G)

**Kohl's Department Stores, Inc. ~ Kohl's #10252**  
**Docket No. 12-0100**

**Site:** 6245 Wilson Mills Road

## EQUIPMENT DATA - EXISTING

## Fan Data

Fan type:  Impeller type:

Nominal volume flow:  cfm

Total pressure increase:  in-H<sub>2</sub>O = 0.11 psi Efficiency:

## Transmission

Nominal efficiency: 

## Existing Flow Control

## Motor and Supply Data

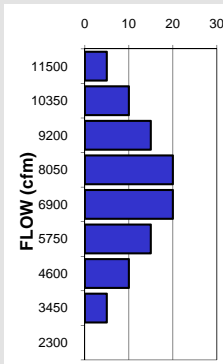
Supply voltage:  440/460/480 V  
Required motor power:  
Motor power:  Hp 7.5 Hp  
including 10% safety margin

Motor efficiency:

## Operating Profile

Annual running time:  h

<input type="text" value="5"/> %	=	182 h	at nom.flow
<input type="text" value="10"/> %	=	364 h	at 90% flow
<input type="text" value="15"/> %	=	546 h	at 80% flow
<input type="text" value="20"/> %	=	728 h	at 70% flow
<input type="text" value="20"/> %	=	728 h	at 60% flow
<input type="text" value="15"/> %	=	546 h	at half flow
<input type="text" value="10"/> %	=	364 h	at 40% flow
<input type="text" value="5"/> %	=	182 h	at 30% flow
<input type="text" value="0"/> %	=	0 h	at 20% flow



100

GENERAL DATA  
Measurement Units

Calculated by:

Calculated for:

Fan ID:

EQUIPMENT DATA - NEW  
Improved Control Flow by:

## RESULTS

Specific fan power:  kW/(m<sup>3</sup>/s)Saving percentage: 

Annual energy consumption:

with existing control method:  MWhwith improved control method:  MWhAnnual energy saving:  MWhAnnual CO<sub>2</sub> reduction:  tCO<sub>2</sub> emission:  lb/kWh

## Economic Data

Currency:

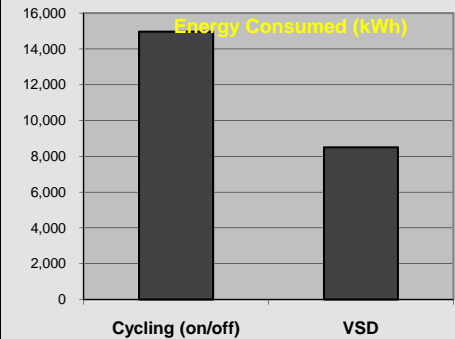
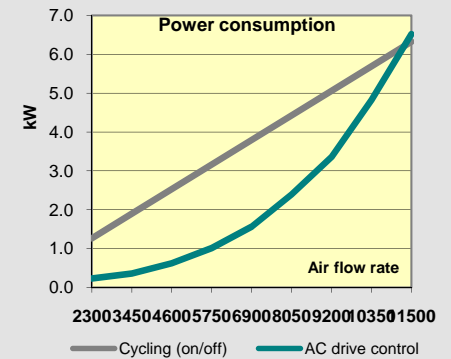
Energy price:  \$/kWh

Investment cost:  \$

Interest rate:

Service life:  years

## Energy Consumption



## Economic Results

Annual saving:  \$

Payback period:  years

Net present value:  \$



Ohio Edison • The Illuminating Company • Toledo Edison

<b>Project Name:</b>	Kohls #10252
<b>Site Name:</b>	6245 Wilson Mills Rd., Highland Heights, OH 44143
<b>Completed by (Name):</b>	Marcello Crestani
<b>Date completed:</b>	2/2/2011

### Variable Frequency Drive Rebate Form

VFD and Controlled Motor Nameplate DATA											Total Motor Incentive <sup>1</sup> \$
Motor Application	VFD Manufacturer	VFD Model Number	Unique Motor ID(s)	Motor Location	Enclosure type: TEFC or ODP	Annual Hours of Operation <sup>2</sup>	Load Factor (LF) <sup>3</sup>	Motor Model Number	Motor HP	Motor Nominal Efficiency	
HVAC	Emerson	HSKD	n/a	RTU Supply Fan	TEFC	5356	0.8	n/a	7.5	80%	1,800
Incentive through 10/11/2011 @ \$30/hp											1,800

(1) VFD incentives are calculated at a flat rate of \$30 per horsepower controlled, up to a maximum of 500 hp controlled per VFD.

When a single VFD is used to control two motors in a lead/lag (standby, redundant) configuration, use only the horsepower rating of one motor to figure controlled horsepower. For instance, if a single VFD controls two 30hp motors with only one operating at a time, the incentive calculation should be based on 30 hp: 30hp x \$30/hp = \$900.

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

(3) For all motor and VFD applications, use the Load Factor (LF) default value of 0.80, unless data is available to support the use of a motor-specific LF other than 0.80. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

Customer Legal Entity Name: Kohl's Department Stores Inc.  
Site Address: Kohls #10254  
Principal Address: 17555 Southpark Center

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Kohl's #10254	HVAC Energy Saving Retrofit	See "Kohls #10254 - HVAC Savings Worksheet.xls" and "Kohls #10254 - Custom Application.xls".	Equipment had approximately 2 years of useful service remaining. Approx 7/2013.	N/A

## Exhibit 2

Customer Legal Entity Name: Kohl's Department Stores Inc.

**Site Address:** Kohls #10254

Principal Address: 17555 Southpark Center

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2010	1,098,900	1,098,900	21,894 1,098,900
<b>Average</b>	<b>1,098,900</b>	<b>1,098,900</b>	<b>560,397</b>

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>
1	Kohl's #10254	07/04/2011	\$124,424	\$62,212	44,151	44,151	8	\$3,532	\$2,649
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
		Total	\$124,424		44,151	44,151	8	\$3,532	\$2,649

**Docket No. 12-0100**

**Site:** 17555 Southpark Center

## Notes

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

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

**Commitment  
Payment  
\$**



**\$0**



### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	44	\$ 308	\$ 13,611	\$ 4,050	\$2,649		\$ 6,699	2.0
<b>Total</b>	<b>44</b>	<b>\$ 308</b>	<b>13,611</b>	<b>4,050</b>	<b>\$2,649</b>	<b>\$0</b>	<b>6,699</b>	<b>2.0</b>

#### Notes

- (A) From Exhibit 2, = kWh saved / 1000
- (B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices. This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).
- (C) = (A) \* (B)
- (D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.
- (E) This is the amount of the cash rebate paid to the customer for this project.
- (F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.
- (G) = (D) + (E) + (F)
- (H) = (C) / (G)

**Kohl's Department Stores Inc. ~ Kohls #10254**  
**Docket No. 12-0100**

**Site:** 17555 Southpark Center



<b>Project Name and Number:</b>	Kohl's #10254
<b>Site Name:</b>	Kohl's #10254
<b>Completed by (Name):</b>	<b>Marcello Crestani</b>
<b>Date completed:</b>	<b>9/26/2011</b>

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
HVAC Retrofits	44,151	3532.04
<b>Total Project Energy Savings kWh</b>	<b>44,151</b>	
<b>Total Custom Prescriptive Rebate Amount \$</b>	<b>\$</b>	<b>3,532.04</b>

	Notes about this rebate calculation:

## HVAC SAVINGS WORKSHEET

Kohl's #10254  
17555 Southpark Center  
Strongsville, OH 44136

Baseline: ASHRAE 90.1 (2004) PRE 1/1/2010	
0-5.4 Tons	13 SEER (1.02 kW/ton)
5.4-11.25 Tons	10.3 (1.17 kW/ton)
11.25-20 Tons	9.7 (1.24 kW/ton)
20-60 Tons	9.5 (1.263 kW/ton)

*\*Equivalent Full Load Hours  
per ASHRAE standards for Chicago, IL region.*

**\*EFLH: 1090**

### system information

Unit No.	Make	Model	Ton	EER	Baseline (ASHRAE) kW/ton	Installed Equipment kW/ton
AC-1	York	ZR240S24C4DKV1	20	12.1	1.26	0.99
AC-2	York	ZR240S24C4DKV1	20	12.1	1.26	0.99
AC-3	York	ZR240S24C4DKV1	20	12.1	1.26	0.99
AC-4	York	ZJ240S24Q4DKV1	20	11.6	1.26	1.03
AC-5	York	ZJ240S24Q4DKV2	20	11.6	1.26	1.03
AC-6	York	ZJ240S24Q4DKV3	20	11.6	1.26	1.03
AC-7	York	ZJ240S24Q4DKV4	20	11.6	1.26	1.03
AC-8	York	ZJ180S24C4DKV1	15	12.4	1.24	0.97
AC-9	York	ZJ120S20Q4DKV5	10	12.2	1.17	0.98
<b>total tons:</b>			<b>165</b>			

### kW and kWh initial savings calcs

Baseline (kW)	Installed Equipment (kW)	kW savings	baseline kWh	installed kWh	initial kWh savings
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
25.3	19.8	5.4	27,533.40	21,619.83	5,913.57
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
25.3	20.7	4.6	27,533.40	22,551.72	4,981.68
18.6	14.5	4.1	20,274.00	15,822.58	4,451.42
11.7	9.8	1.9	12,753.00	10,721.31	2,031.69
207.12	166.61	40.51	225,760.80	181,610.29	<b>44,150.51</b>

**TOTAL SYSTEM kWh saved: 44,150.51**

Customer Legal Entity Name: Kohl's Department Stores, Inc.  
Site Address: Kohl's #10464  
Principal Address: 35906 Detroit Road

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	Kohl's #10464 Lighting	Installing high efficient fixtures such as 39W and 100W Metal Halides; 2, 3, and 4 feet T8 fixtures; 21-watt and 28-watt T5 fixtures; and 32-watt LED track heads.	See "Kohls #10464 - Lighting Worksheet.xls".	Useful remaining life of existing lighting was approximately 2 years.	N/A
2	Kohls #10464 Motors & Drives	Purchased and installed (8) new 7.5HP Yaskawa VFD on HVAC unit. A VFD was not previously installed on HVAC system. (Dept. 54601)	See "Kohls #10464 - Motors and Drives Application.xls" and "Kohls #10464 - VFD Calculations.pdf".	N/A	VFD was added to HVAC system which did not previously have one installed.

## Exhibit 2

Customer Legal Entity Name: Kohl's Department Stores, Inc.

**Site Address:** Kohl's #10464

**Principal Address:** 35906 Detroit Road

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C) <i>Note 1</i>
2010	1,099,520	1,099,520	152,015 1,116,484
<b>Average</b>	<b>1,099,520</b>	<b>1,099,520</b>	<b>634,250</b>

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ <i>Note 2</i>
1	Kohl's #10464 Lighting	03/11/2011	\$66,414	\$33,207	128,262	128,262	37	\$6,413	\$4,810
2	Kohls #10464 Motors & Drives	08/25/2010	\$14,506	\$7,253	48,000	48,000	8	\$1,800	\$1,350
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
		Total	\$80,920		176,262	176,262	45	\$8,213	\$6,160

**Docket No. 13-0044**

**Site:** 35906 Detroit Road

## Notes

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

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

**Commitment  
Payment  
\$**

**\$0**

### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	128	\$ 308	\$ 39,541	\$ 2,025	\$4,810		\$ 6,835	<b>5.8</b>
2	48	\$ 308	\$ 14,797	\$ 2,025	\$1,350		\$ 3,375	<b>4.38</b>
<b>Total</b>	<b>176</b>	<b>\$ 308</b>	<b>54,338</b>	<b>4,050</b>	<b>\$6,160</b>	<b>\$0</b>	<b>10,210</b>	<b>5.3</b>

#### Notes

(A) From Exhibit 2, = kWh saved / 1000

(B) This value represents avoided energy costs (wholesale energy prices) from the Department of Energy, Energy Information Administration's 2009 Annual Energy Outlook (AEO) low oil prices case. The AEO represents a national average energy price, so for a better representation of the energy price that Ohio customers would see, a Cinergy Hub equivalent price was derived by applying a ratio based on three years of historic national average and Cinergy Hub prices. This value is consistent with avoided cost assumptions used in EE&PDR Program Portfolio and Initial Benchmark Report, filed Dec 15, 2009 (See Section 8.1, paragraph a).

(C) = (A) \* (B)

(D) Represents the utility's costs incurred for self-directed mercantile applications for applications filed and applications in progress. Includes incremental costs of legal fees, fixed administrative expenses, etc.

(E) This is the amount of the cash rebate paid to the customer for this project.

(F) Based on approximate Administrator's variable compensation for purposes of calculating the UCT, actual compensation may be less.

(G) = (D) + (E) + (F)

(H) =(C) / (G)

**Kohl's Department Stores, Inc. ~ Kohl's #10464**  
**Docket No. 13-0044**

**Site:** 35906 Detroit Road

## Lighting Inventory Form

Applicant Name:	Kohl's #10464
Facility Name:	Kohl's #10464
Date:	11/9/2011

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

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

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

[illegible]





PROJECT BASIC INFORMATION							PRE-INSTALLATION							POST-INSTALLATION							Energy Calcululations												Post Fixture Cut Sheet Number				
Line Item	Building Address	Floor	Area Description	Interior or Exterior Fixture	Predominant Space Type	Area Cooling	Pre Fixture Qty	Pre Fixture Code	Pre Watts / Fixture (W)	Pre kW / Space (kW)	Existing Control drop down	Existing Sensor Quantity  When applicable	Post Fixture Qty	Post Fixture Code	Post Watts/ Fixture (W)	Post kW / Space (kW)	Proposed Control  Please enter DAYLTG, OCC or NONE	Proposed Sensor Quantity  When applicable	Interior Change in Connected Load (kW) excluding CFLs or Exit Signs	Exterior Change in Connected Load (kW) excluding CFLs or Exit Signs	Change in Connected Load (kW) CFL or LED exit sign	Applicant Coincidence Factor (CF) Estimate	Coincidence Factor	Interactive Factor (demand)	Interactive Factor (energy)	Pre Controls Factor	Post Controls Factor	Demand Savings (kW)	Applicant Equivalent Full Load Hours (EFLH) Estimate	Prescribed Equivalent Full Load Hours	Annual Interior Fixture kWh Saved (excluding CFLs or Exit Signs)	Annual Exterior Fixture kWh Saved (excluding CFLs or Exit Signs)		Annual kWh Saved (CFL or LED exit signs only)	Annual kWh Saved (Sensors only)		
247																																					
248											NONE							NONE																			
249											NONE							NONE																			
250											NONE							NONE																			
Totals							663			69.45			663			32.12				37.33										44.52			128,262				
																				37.33																	

Note: If your total change in connected load is greater than or equal to 50 kW the cell above will be red. Please see row 4 on the Instructions tab for information on adjusting the predominant space type to "Other" and estimating CF and EFLH values.

## Project Estimated Annual Savings Summary

Estimated Annual kWh Savings	128,262
Total Change in Connected Load	37.33

Annual Estimated Cost Savings	\$12,826.20
Annual Operating Hours	3,068

Interior Lighting Incentive @ \$0.05/kWh (excluding CFLs, sensors, or LED exit signs)	\$6,413.10
Exterior Lighting Incentive @ \$0.50/W (excluding CFLs, sensors, or LED exit signs)	\$0.00
Total CFL Incentive @ \$1/screw-in CFL lamp; \$15/hard-wired CFL lamp (includes all CFLs, both interior and exterior)	\$0.00
Total LED Exit Incentive @ \$10/exit sign	\$0.00
Total Lighting Controls Incentive @ \$25/sensor (includes all Lighting Controls, both interior and exterior)	\$0.00

Total Calculated Incentive	\$6,413.10
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Total Fixture Quantity excluding CFLs and LED Exit Sign	663
Total Lamp Quantity for Screw-In CFLs	0
Total Lamp Quantity for Hard-Wired CFLs	0
Total Fixture Quantity for LED Exit Signs	0
Total Quantity for Occupancy Sensors	0
Total Quantity for Daylight Sensors	0

Please briefly describe how you estimated your coincidence factor (CF) for facility type "Other" indicated on the Lighting Form tab

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Demand Savings (For Internal Use Only)	44.52
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Ohio Edison • The Illuminating Company • Toledo Edison

Project Name:	Kohls #10464
Site Name:	35906 Detroit Rd.
Completed by (Name):	Marcello Crestani
Date completed:	8/25/2010

### Variable Frequency Drive Rebate Form

VFD and Controlled Motor Nameplate DATA											Total Motor Incentive <sup>1</sup> \$
Motor Application	VFD Manufacturer	VFD Model Number	Unique Motor ID(s)	Motor Location	Enclosure type: TEFC or ODP	Annual Hours of Operation <sup>2</sup>	Load Factor (LF) <sup>3</sup>	Motor Model Number	Motor HP	Motor Nominal Efficiency	
HVAC	Emerson	HSKD		RTU	TEFC	5356	0.8	Unknown	7.5	80%	1,800
Incentive through 10/11/2011 @ \$30/hp											1,800

(1) VFD incentives are calculated at a flat rate of \$30 per horsepower controlled, up to a maximum of 500 hp controlled per VFD.

When a single VFD is used to control two motors in a lead/lag (standby, redundant) configuration, use only the horsepower rating of one motor to figure controlled horsepower. For instance, if a single VFD controls two 30hp motors with only one operating at a time, the incentive calculation should be based on 30 hp: 30hp x \$30/hp = \$900.

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

(3) For all motor and VFD applications, use the Load Factor (LF) default value of 0.80, unless data is available to support the use of a motor-specific LF other than 0.80. Please attach an explanation, including your analysis and/or data used, to support motor-specific LF value.

## EQUIPMENT DATA - EXISTING

## Fan Data

Fan type: Centrifugal Impeller type: Forward curved (F)

Nominal volume flow: 11,500.00 cfm

Total pressure increase: 3 in-H<sub>2</sub>O = 0.11 psi Efficiency: 80%

## Transmission

Nominal efficiency: 100.0 %

## Existing Flow Control

Cycling (on/off)

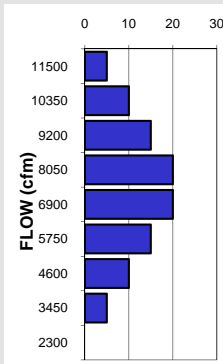
## Motor and Supply Data

Supply voltage: 460 V 440/460/480 V  
 Motor power: 7.5 Hp Required motor power:  
 7.5 Hp including 10% safety margin  
 Motor efficiency: 80.0 %

## Operating Profile

Annual running time: 3,640 h

5%	=	182 h	at nom.flow
10%	=	364 h	at 90% flow
15%	=	546 h	at 80% flow
20%	=	728 h	at 70% flow
20%	=	728 h	at 60% flow
15%	=	546 h	at half flow
10%	=	364 h	at 40% flow
5%	=	182 h	at 30% flow
	=	0 h	at 20% flow



100

GENERAL DATA  
Measurement Units

Calculated by:  
 Calculated for:  
 Fan ID:

EQUIPMENT DATA - NEW  
Improved Control Flow by:

ABB Drives for HVAC (ACH550)

ACH550-U1-015A-4

## RESULTS

Specific fan power: 1.2 kW/(m<sup>3</sup>/s)

Saving percentage: 43.2 %

Annual energy consumption:

with existing control method: 15 MWh

with improved control method: 8 MWh

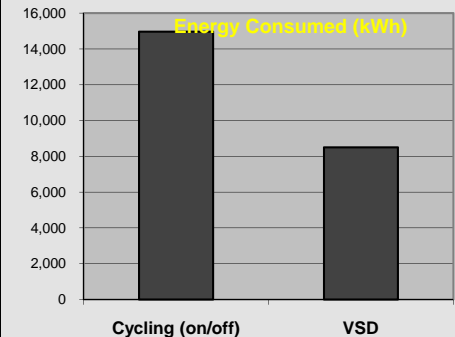
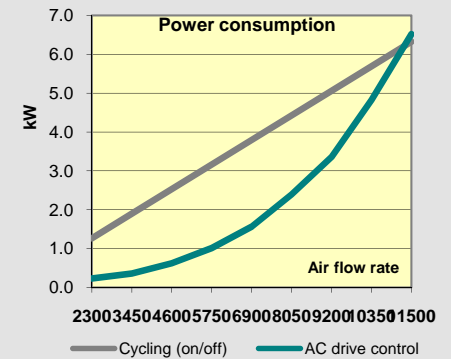
Annual energy saving: 6 MWh

Annual CO<sub>2</sub> reduction: 3 tCO<sub>2</sub> emission: 0.5 lb/kWh

## Economic Data

Currency: \$  
 Energy price: 0.11 \$/kWh  
 Investment cost: 1,800 \$  
 Interest rate: 5.0 %  
 Service life: 15.0 years

## Energy Consumption



## Economic Results

Annual saving: 711 \$  
 Payback period: 2.5 years  
 Net present value: 5,578 \$

**Mercantile Customer Project Commitment Agreement**  
**Cash Rebate Option**

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between The Cleveland Electric Illuminating Company, its successors and assigns (hereinafter called the "Company") and Kohl's Department Stores, Inc., Taxpayer ID No.13-3357362its permitted successors and assigns (hereinafter called the "Customer") (collectively the "Parties" or individually the "Party") and is effective on the date last executed by the Parties as indicated below.

**WITNESSETH**

WHEREAS, the Company is an electric distribution utility and electric light company, as both of these terms are defined in R.C. § 4928.01(A); and

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

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

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

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

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

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

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

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

1. **Customer Energy Projects.** Customer hereby commits to the Company and Company accepts for integration into the Company Plan the Customer Energy Project(s) set forth on attached Exhibit 1. Said commitment shall be for the life of the Customer Energy Project(s). Company will incorporate said project(s) into the Company Plan to the extent that such projects qualify. In so committing, Customer acknowledges that the information provided to the Company about the Customer Energy Project(s) is true and accurate to the best of its knowledge.
  - a. By committing the Customer Energy Project(s) to the Company, Customer acknowledges and agrees that the Company shall control the use of the kWh and/or kW reductions

resulting from said projects for purposes of complying with the Statute. It is expressly agreed that Customer may use any and all energy related and other attributes created from the Customer Energy Project(s) to the extent permitted by state or federal laws or regulations, provided, and to the extent, that such uses by Customer do not conflict with said compliance by the Company.

- b. The Company acknowledges that some of Customer's Energy Projects contemplated in this paragraph may have been performed under certain other federal and/or state programs in which certain parameters are required to be maintained in order to retain preferential financing or other government benefits (individually and collectively, as appropriate, "Benefits"). In the event that the use of any such project by the Company in any way affects such Benefits, and upon written request from the Customer, Company will release said Customer's Energy Project(s) to the extent necessary for Customer to meet the prerequisites for such Benefits. Customer acknowledges that such release (i) may affect Customer's cash rebate discussed in Article 3 below; and (ii) will not affect any of Customer's other requirements or obligations.
  - c. Any future Customer Energy Project(s) committed by Customer shall be subject to a separate application and, upon approval by the Commission, said projects shall become part of this Agreement.
  - d. Customer will provide Company or Company's agent(s) with reasonable assistance in the preparation of the Commission's standard joint application for approval of this Agreement ("Joint Application") that will be filed with the Commission, with such Joint Application being consistent with then current Commission requirements.
  - e. Upon written request and reasonable advance notice, Customer will grant employees or authorized agents of either the Company or the Commission reasonable, pre-arranged access to the Customer Energy Project(s) for purposes of measuring and verifying energy savings and/or peak demand reductions resulting from the Customer Energy Project(s). It is expressly agreed that consultants of either the Company or the Commission are their respective authorized agents.
2. **Joint Application to the Commission.** The Parties will submit the Joint Application using the Commission's standard "Application to Commit Energy Efficiency/Peak Demand Reduction Programs" ("Joint Application") in which they will seek the Commission's approval of (i) this Agreement; (ii) the commitment of the Customer Energy Project(s) for inclusion in the Company Plan; and (iii) the Customer's Cash Rebate.

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

- i. A narrative description of the Customer Energy Project(s), including but not limited to, make, model and year of any installed and/or replaced equipment;
  - ii. A copy of this Agreement; and
  - iii. A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results.
3. **Customer Cash Rebate and Annual Report.** Upon Commission approval of the Joint Application, Customer shall provide Company with a W-9 tax form, which shall at a minimum include Customer's tax identification number. Within the greater of 90 days of the Commission's approval of the Joint Application or the completion of the Customer Energy Project, the Company



will issue to the Customer the Cash Rebate in the amount set forth in the Commission's Finding and Order approving the Joint Application.

- a. Customer acknowledges: i) that the Company will cap the Cash Rebate at the lesser of 50% of Customer Energy Project(s) costs or \$250,000; ii) the maximum rebate that the Customer may receive per year is \$500,000 per Taxpayer Identification Number per utility service territory; and iii) if the Customer Energy Project qualifies for a rebate program approved by the Commission and offered by the Company, Customer may still elect to file such project under the Company's mercantile customer self direct program, however the Case Rebate that will be paid shall be discounted by 25%; and
- b. Customer acknowledges that breaches of this Agreement, include, but are not limited to:
  - i. Customer's failure to comply with the terms and conditions set forth in the Agreement, or its equivalent, within a reasonable period of time after receipt of written notice of such non-compliance;
  - ii. Customer knowingly falsifying any documents provided to the Company or the Commission in connection with this Agreement or the Joint Application.
- c. In the event of a breach of this Agreement by the Customer, Customer agrees and acknowledges that it will repay to the Company, within 90 days of receipt of written notice of said breach, the full amount of the Cash Rebate paid under this Agreement. This remedy is in addition to any and all other remedies available to the Company by law or equity.

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

- a. If the Commission fails to approve the Joint Agreement;
- b. Upon order of the Commission; or
- c. At the end of the life of the last Customer Energy Project subject to this Agreement.

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

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

- a. Notwithstanding the above, a Party may disclose to its employees, directors, attorneys, consultants and agents all documents and information furnished by the other Party in connection with this Agreement, provided that such employees, directors, attorneys, consultants and agents have been advised of the confidential nature of this information and through such disclosure are deemed to be bound by the terms set forth herein.

- b. A Party receiving such Confidential Information shall protect it with the same standard of care as its own confidential or proprietary information.
  - c. A Party receiving notice or otherwise concluding that Confidential Information furnished by the other Party in connection with this Agreement is being sought under any provision of law, to the extent it is permitted to do so under any applicable law, shall endeavor to: (i) promptly notify the other Party; and (ii) use reasonable efforts in cooperation with the other Party to seek confidential treatment of such Confidential Information, including without limitation, the filing of such information under a valid protective order.
  - d. By executing this Agreement, Customer hereby acknowledges and agrees that Company may disclose to the Commission or its Staff any and all Customer information, including Confidential Information, related to a Customer Energy Project, provided that Company uses reasonable efforts to seek confidential treatment of the same.
6. **Taxes.** Customer shall be responsible for all tax consequences (if any) arising from the payment of the Cash Rebate.
7. **Notices.** Unless otherwise stated herein, all notices, demands or requests required or permitted under this Agreement must be in writing and must be delivered or sent by overnight express mail, courier service, electronic mail or facsimile transmission addressed as follows:

**If to the Company:**

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

**If to the Customer:**

Kohl's Department Stores, Inc.  
N56 W17000 Ridgewood Drive  
Menomonee Falls, WI 53051  
Marcy Schaefer  
262-703-5329  
[Marcy.Schaefer@kohls.com](mailto:Marcy.Schaefer@kohls.com)

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

8. **Authority to Act.** The Parties represent and warrant that they are represented by counsel in connection with this Agreement, have been fully advised in connection with the execution thereof, have taken all legal and corporate steps necessary to enter into this Agreement, and that the undersigned has the authority to enter into this Agreement, to bind the Parties to all provisions herein and to take the actions required to be performed in fulfillment of the undertakings contained herein.
9. **Non-Waiver.** The delay or failure of either party to assert or enforce in any instance strict performance of any of the terms of this Agreement or to exercise any rights hereunder conferred, shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon such terms or rights at any later time or on any future occasion.
10. **Entire Agreement.** This Agreement, along with related exhibits, and the Company's Rider DSE, or its equivalent, as amended from time to time by the Commission, contains the Parties' entire understanding with respect to the matters addressed herein and there are no verbal or collateral representations, undertakings, or agreements not expressly set forth herein. No change in, addition to, or waiver of the terms of this Agreement shall be binding upon any of the Parties unless the same is set forth in writing and signed by an authorized representative of each of the Parties. In

the event of any conflict between Rider DSE or its equivalent and this document, the latter shall prevail.

11. **Assignment.** Customer may not assign any of its rights or obligations under this Agreement without obtaining the prior written consent of the Company, which consent will not be unreasonably withheld. No assignment of this Agreement will relieve the assigning Party of any of its obligations under this Agreement until such obligations have been assumed by the assignee and all necessary consents have been obtained.
12. **Severability.** If any portion of this Agreement is held invalid, the Parties agree that such invalidity shall not affect the validity of the remaining portions of this Agreement, and the Parties further agree to substitute for the invalid portion a valid provision that most closely approximates the economic effect and intent of the invalid provision.
13. **Governing Law.** This Agreement shall be governed by the laws and regulations of the State of Ohio, without regard to its conflict of law provisions.
14. **Execution and Counterparts.** This Agreement may be executed in multiple counterparts, which taken together shall constitute an original without the necessity of all parties signing the same page or the same documents, and may be executed by signatures to electronically or telephonically transmitted counterparts in lieu of original printed or photocopied documents. Signatures transmitted by facsimile shall be considered original signatures.

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

Kohl's  
(Customer)  
By: Marcy Schaefer  
Title: Energy MGR  
Date: 9/21/2011

Illuminating Company  
(Company)  
By: John C. Dampi  
Title: VP, Energy Efficiency  
Date: 11-26-12

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**1/31/2013 7:45:41 AM**

**in**

**Case No(s). 13-0044-EL-EEC**

Summary: Application to Commit Energy Efficiency/Peak Demand Reduction Programs of The Cleveland Electric Illuminating Company and Kohl's Department Stores, Inc. electronically filed by Ms. Jennifer M. Sybyl on behalf of The Cleveland Electric Illuminating Company and Kohl's Department Stores, Inc.