



Case No.: 12-2267 -EL-EEC

Mercantile Customer: **Fourth and Vine Tower/Central Trust**

Electric Utility: **Duke Energy**

Program Title or
Description: **Chiller Tune-ups**

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: **Fourth and Vine Tower/Central Trust**

Principal address: **1 West Fourth Street Suite 417, Cincinnati Ohio 45102**

Address of facility for which this energy efficiency program applies:

1 West Fourth Street Cincinnati Ohio 45102

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 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):
_____.

✓ **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: ____kWh

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. **Chiller tune-ups - preventative maintenance performed resulting in energy savings.**
-

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?

February 2009 and March 2011

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

40 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 **\$4000.00 (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.)

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 **2.21 (See Attachment 1 - Appendix 4)**

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 **\$14,000 (See Attachment 1 - Appendix 5).**

The utility's program costs were **\$2,438(See Attachment 1 - Appendix 6).**

The utility's incentive costs/rebate costs were **\$4000 (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

July 9, 2012

Mr. Ben Hucker
Fourth and Vine Tower – Central Trust
1 West Fourth Street Suite 417
Cincinnati, Ohio 45202

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

Dear Mr. Hucker:

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 \$4000.00 has been proposed for your chiller tune-up projects completed in the 2009 and 2011 calendar years. **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,

A handwritten signature in black ink, appearing to read "Grady Reid, Jr.", written in a cursive style.

Grady Reid, Jr
Product Manager
Mercantile Self Direct Rebates

cc: Mike Harp, Duke Energy
Rob Jung, WECC
Adam Pulskamp, Engineering Excellence

Please indicate your response to this rebate offer within 30 days of receipt.

Rebate is accepted. Rebate is declined.

By accepting this rebate, Fourth and Vine Tower – Central Trust affirms its intention to commit and integrate the energy efficiency projects listed on the following pages into Duke Energy’s peak demand reduction, demand response and/or energy efficiency programs.

Additionally, Fourth and Vine Tower – Central Trust also agrees to serve as joint applicant in any future filings necessary to secure approval of this arrangement as required by PUCO and to comply with any information and reporting requirements imposed by rule or as part of that approval.

Finally, Fourth and Vine Tower – Central Trust affirms that all application information submitted to Duke Energy pursuant to this rebate offer is true and accurate. Information in question would include, but not be limited to, project scope, equipment specifications, equipment operational details, project costs, project completion dates, and the quantity of energy conservation measures installed.

If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects?

YES NO

If rebate is declined, please indicate reason (optional):

 PETER BIRMINGHAM 7/18/12
 Customer Signature Printed Name Date

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure (ECM)	Proposed Rebate Amount
ECM-1	Water Cooled Chiller Tune-ups – Year 2009 (Qty – 2)	\$2000.00
ECM-2	Water Cooled Chiller Tune-ups – Year 2011 (Qty – 2)	\$2000.00
Total		\$4000.00



Public Utilities Commission

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

Case No.: ____ - ____ -EL-EEC

State of Ohio :

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

- I am the duly authorized representative of:
Fourth and Vine Tower - Central Trust
[insert customer or EDU company name and any applicable name(s) doing business as]
- 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.
- I am aware of fines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

Peter Birmingham Property Manager
Signature of Affiant & Title

Sworn and subscribed before me this 6th day of August,
2012 Month/Year

Kathryn M. Sleaman
Signature of official administering oath

Kathryn Sleaman
Print Name and Title

My commission expires on 04-28-2015



KATHRYN M. SLEAMAN
Notary Public, State of Ohio
My Comm. Expires April 28, 2015

Attachment 1 – Fourth and Vine Tower – Central Trust

Appendix 1 – Electric History

07900884 03		
CENTRAL TRUST		
309 VINE		
CINCINNATI, OH 45202		
Date	Days	Actual KWH
6/21/2012	30	599,720
5/22/2012	29	583,241
4/23/2012	32	638,938
3/22/2012	29	589,486
2/22/2012	29	604,298
1/24/2012	34	691,609
12/21/2011	30	615,182
11/21/2011	31	619,673
10/21/2011	29	590,498
9/22/2011	30	619,447
8/23/2011	29	612,044
7/25/2011	32	657,941
Total		7,422,077

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
Water Cooled Chiller Tune Up	64.46	2000	128,920	0.02	40

Appendix 3 – Cash Rebate

Measure	Amount
Water Cooled Chiller Tune Up	\$4,000

Appendix 4 – Utility Cost Test

Measure	UCT
Water Cooled Chiller Tune Up	2.21

Appendix 5 – Avoided Supply Costs

Measure	T&D	Production	Capacity	Quantity	Total Avoided Costs
Water Cooled Chiller Tune Up	\$1.00	\$4.00	\$2.00	2000	\$14,000

Appendix 6 – Utility Program Costs

Measure	Qty	Admin Costs	Total Costs
Water Cooled Chiller Tune Up	2000	\$1.22	\$2,438

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 SelfDirect@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 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):

Account Number	Annual Usage	Account Number	Annual Usage
9190-2125-01-4	1576309		

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart Saver® 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 Saver 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 Saver 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:

<input checked="" type="checkbox"/> All sections of appropriate application(s) are completed	<input checked="" type="checkbox"/> Proof of payment.*	<input checked="" type="checkbox"/> Manufacturer's Spec sheets	<input type="checkbox"/> Energy model/calculations and detailed inputs for Custom applications
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* 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
Lighting	MSD Custom Part 1 <input type="checkbox"/> Custom Lighting Worksheet <input type="checkbox"/>	MSD Prescriptive Lighting <input type="checkbox"/>	MSD Prescriptive Lighting <input type="checkbox"/>
		MSD Custom Part 1 <input type="checkbox"/> Custom Lighting Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> Custom Lighting Worksheet <input type="checkbox"/>
Heating & Cooling	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Prescriptive Heating & Cooling <input type="checkbox"/>
			MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>
Window Films, Programmable Thermostats, & Guest Room Energy Management Systems	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General and/or EMS Worksheet(s) <input type="checkbox"/>	MSD Prescriptive Heating & Cooling <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General and/or EMS Worksheet(s) <input type="checkbox"/>
Chillers & Thermal Storage	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Prescriptive Chillers & Thermal Storage <input type="checkbox"/>
			MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>
Chiller Tune-ups	MSD Prescriptive Chiller Tune-ups <input type="checkbox"/>	MSD Prescriptive Chiller Tune-ups <input checked="" type="checkbox"/>	MSD Prescriptive Chiller Tune-ups <input type="checkbox"/>
Motors & Pumps	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Prescriptive Motors, Pumps & Drives <input type="checkbox"/>
			MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>
VFDs	Not Applicable	MSD Prescriptive Motors, Pumps & Drives <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom VFD Worksheet <input type="checkbox"/>
		MSD Custom Part 1 <input type="checkbox"/> MSD Custom VFD Worksheet <input type="checkbox"/>	
Food Service	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Prescriptive Food Service <input type="checkbox"/>
			MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>
Air Compressors	MSD Custom Part 1 <input type="checkbox"/> MSD Custom Compressed Air Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom Compressed Air Worksheet <input type="checkbox"/>	MSD Prescriptive Process <input type="checkbox"/>
			MSD Custom Part 1 <input type="checkbox"/> MSD Custom Compressed Air Worksheet <input type="checkbox"/>
Process	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	MSD Prescriptive Process <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>
		MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>	
Energy Management Systems	MSD Custom Part 1 <input type="checkbox"/> MSD Custom EMS Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom EMS Worksheet <input type="checkbox"/>	MSD Custom Part 1 <input type="checkbox"/> MSD Custom EMS Worksheet <input type="checkbox"/>
Behavioral*** & No/Low Cost	MSD Custom Part 1 <input type="checkbox"/> MSD Custom General Worksheet <input type="checkbox"/>		

** 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 Chiller Tune-up Service 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)		
<input type="checkbox"/> Data Centers	<input type="checkbox"/> Full Service Restaurant	<input type="checkbox"/> Office
<input type="checkbox"/> Education/K-12	<input type="checkbox"/> Healthcare	<input type="checkbox"/> Public Assembly
<input type="checkbox"/> Education Other	<input type="checkbox"/> Industrial	<input type="checkbox"/> Public Order/Safety
<input type="checkbox"/> Elder Care/Nursing Home	<input type="checkbox"/> Lodging	<input type="checkbox"/> Religious Worship/Church
<input type="checkbox"/> Food Sales/Grocery	<input type="checkbox"/> Retail (Small Box)	<input type="checkbox"/> Service
<input type="checkbox"/> Fast Food Restaurant	<input type="checkbox"/> Retail (Big Box)	<input type="checkbox"/> Warehouse
<input checked="" type="checkbox"/> Other:		
How did you hear about the program? (check one)		
<input type="checkbox"/> Duke Energy Representative	<input type="checkbox"/> Web Site	<input type="checkbox"/> Radio
<input checked="" type="checkbox"/> Contractor / Vendor	<input type="checkbox"/> Other _____	

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

<input checked="" type="checkbox"/> All sections of application	<input checked="" type="checkbox"/> Invoice with make, model number, quantity and equipment manufacturer	<input checked="" type="checkbox"/> Tax ID number for payee	<input checked="" type="checkbox"/> Customer/vendor agree to Terms and Conditions
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Customer Information			
Customer/Business	Fourth and Vine Tower/Central Trust	Contact	Ben Hucker
Phone	(513) 621-4090	Account Number	9190-2125-01-4
Street Address (Where incentive should be mailed)		1 W. 4th St. Suite 417	
City	Cincinnati	State	OH
		Zip Code	45202
Installation Street Address	1 W. 4 th St. Suite 417		
City	Cincinnati	State	OH
		Zip Code	45202
E-mail Address	bhucker@aol.com		

*Failure to provide the account number associated with the location where the installation took place will result in rejection of the application.

Vendor Information			
Vendor	Engineering Excellence	Contact	Adam Pulskamp
Phone	(513) 781-6000	Fax	(513) 781-7741
Street Address		10 Knollcrest Dr.	
City	Cincinnati	State	OH
		Zip Code	45237
E-mail Address	apulskamp@engineeringexcellence		

If Duke Energy has questions about this application, who should we contact? Customer Vendor

Payment Information		
Who should receive incentive payment?	<input type="checkbox"/> Customer	<input checked="" type="checkbox"/> Vendor (Customer must sign below)
I hereby authorize payment of incentive directly to the vendor:	Customer Signature (written signature)	*** Ben Hucker
	Date	*** 6/19/12
Provide Tax ID Number for Payee	Customer Tax ID #	N/A
	Vendor Tax ID #	261394367

Terms and Conditions			
I have read and hereby agree to the Terms & Conditions and Program Requirements.			
Customer Signature	*** Ben Hucker	Vendor Signature	*** [Signature]
Date	*** 6/19/12	Date	*** 6-20-12
Title	*** Chief Engineer	Title	*** Program Coordinator

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.

Air Cooled and Water Cooled Chiller Tune-ups						
Manufacturer and Model #	# of Units	Tons Per unit*	Total Project Cost	Current Service Date	Previous Service Date	Total Incentive
Carrier 19DK7894CQ	2	500	\$5,745.60	3/28/11	3/30/10	\$2,000.00
Carrier 19DK7894CQ	2	500	\$5,745.60	02/28/09	12/24/2008	\$2,000.00

*Provide manufacturer's spec sheet documenting the size of the unit

To Calculate your tune-up incentive*:	
A. Add up equipment capacity of all units serviced (in tons) and multiply by \$2/ton =	\$4,000.00
B. Cost of service = \$11,491.20 x 50% of total service cost =	\$5,745.60
Total Incentive (lesser amount of row A or row B)=	\$4,000.00

*Incentives cannot exceed 50% of total service invoice (external labor and equipment).

Service Requirements:

- This incentive is available only once per unit in a 12 month period.**
- An individual chiller is considered one unit.
- Copy of paid invoice must be included with this application
- Self serviced (internal) labor should not be included as part of the total service cost. Only external labor will be considered as part of the total service invoice.
- Cooling service must include the following normal maintenance items (please check if completed):

<input checked="" type="checkbox"/> Air cooled condenser coil cleaning	<input checked="" type="checkbox"/> Compressor amp draw	<input checked="" type="checkbox"/> Low Pressure controls
<input checked="" type="checkbox"/> System Pressure check and adjust	<input checked="" type="checkbox"/> Supply motor amp draw	<input checked="" type="checkbox"/> High Pressure controls
<input checked="" type="checkbox"/> Filter inspect or replace	<input checked="" type="checkbox"/> Condenser fan(s) amp draw	<input checked="" type="checkbox"/> Crankcase heater operation
<input checked="" type="checkbox"/> Belt inspect or replace	<input checked="" type="checkbox"/> Liquid line temperature	<input checked="" type="checkbox"/> Water cooled chiller condenser tube cleaning
<input checked="" type="checkbox"/> Contactors condition	<input checked="" type="checkbox"/> Suction pressure & temperature	<input checked="" type="checkbox"/> Water cooled chiller evaporator tube cleaning
<input checked="" type="checkbox"/> Evaporator condition	<input checked="" type="checkbox"/> Oil level & pressure	

Incentive Eligibility

- Incentives are only available to customers on 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 anytime.
- Customer may assign the incentive to the vendor who installed/supplied the equipment. The customer's signature is required in the appropriate places on 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.
- Any equipment which, either separately or as part of a project, has or will receive an incentive from any other Duke Energy program
- In no case will Duke Energy pay an incentive above the actual cost of the service.
- 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 3rd party vendor. The 3rd 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.



INVOICE # INVOICE
INVOICE

SOLD BY	PURCHASED BY / INSTALLATION ADDRESS
Engineering Excellence Regional Services LLC	4th and Vine
10 Knollcrest Dr.	1 W. 4th St. Suite 417
Cincinnati, OH 45237	Cincinnati, OH 45202

DUKE ENERGY ACCOUNT #	9190-2125-01-4
DATE	3/28/2011

**Fields Not Required*

Incentive that Product is Eligible For

QTY	DESCRIPTION	MODEL NUMBER	*TYPE	*GENERAL	SPECIFIC INCENTIVE	UNIT PRICE	*LINE TOTAL
2	Carrier 500 Ton Chiller Maintenance	19DK7894CQ	Chillers_Thermal Storage	Chiller Tune Up	Chiller Tune Up	2,872.80	5,745.60
						*SUBTOTAL	\$ 5,745.60
						*SALES TAX	-
						*TOTAL	\$ 5,745.60



INVOICE

SOLD BY	PURCHASED BY / INSTALLATION ADDRESS
Engineering Excellence Regional Services LLC	4th and Vine
10 Knollcrest Dr.	1 W. 4th St. Suite 417
Cincinnati, OH 45237	Cincinnati, OH 45202

DUKE ENERGY ACCOUNT #	9190-2125-01-4
DATE	2/28/2009

*Fields Not Required

Incentive that Product is Eligible For

QTY	DESCRIPTION	MODEL NUMBER	*TYPE	*GENERAL	SPECIFIC INCENTIVE	UNIT PRICE	*LINE TOTAL
2	Carrier 500 Ton Chiller Maintenance	19DK7894CQ	Chillers_Thermal Storage	Chiller Tune Up	Chiller Tune Up	2,872.80	5,745.60

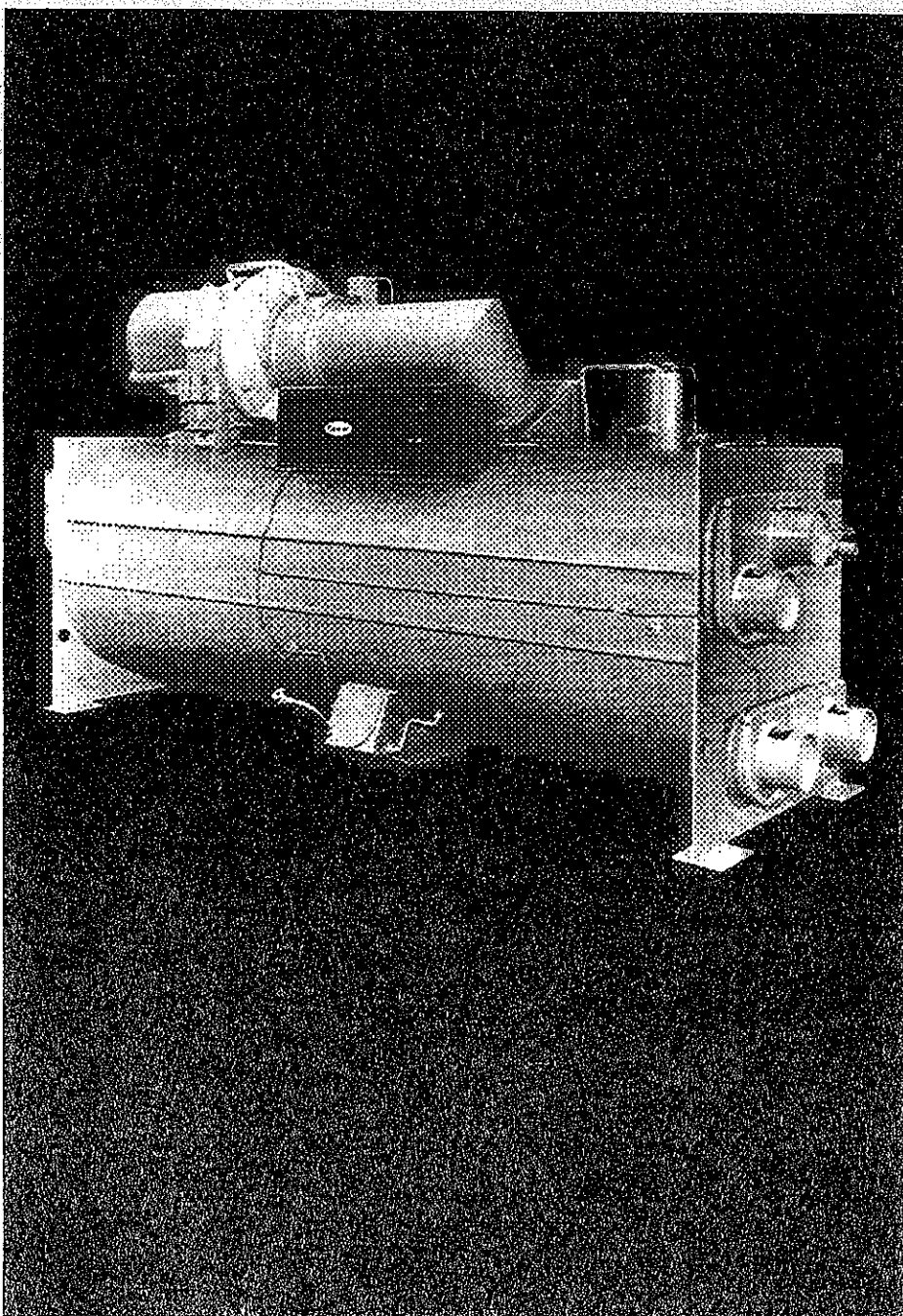
*SUBTOTAL	\$ 5,745.60
*SALES TAX	-
*TOTAL	\$ 5,745.60



Product Data

19DK,DM Packaged Hermetic Centrifugal Liquid Chiller D-1000 Series 50/60 Hz

150-500 Nominal Tons, (500-1750 kW)



Carrier's 19DK/DM hermetic centrifugal liquid chillers combine superior design and reliability with optimum operating efficiency to extend equipment life and reduce operating costs.

Features/Benefits

Superior design, economical, efficient cooling, and dependable performance

Simple and reliable single stage hermetic centrifugal compressors

Dynapoise® transmission — Self-aligning Dynapoise transmission assures uniform contact of gear teeth under all operating conditions. Double helical design reduces thrust forces to assure extended life of thrust bearing surfaces.

Industrial-type bearings — Continuously lubricated industrial type split sleeve, steel backed bearings and multishoe kingsbury type thrust bearing provide long life and facilitate replacement.

Hermetic motors — Low and medium voltage, 50 and 60 Hz Carrier refrigerant cooled hermetic motors have over 20 years of operating experience. They have proven their ability to meet the rigorous starting and operating requirements of both industrial and commercial cooling applications. The hermetic design reduces plant room ventilation and periodic shaft seal maintenance costs required for open drive compressors.

Lubrication system — The proven Carrier oil pump, filter and cooler assembly assures proper supply of oil to all bearing surfaces during start-up, operation, and coast down. Thermo-

Optimum operating efficiency
Precisely machined impellers — Precision cast aluminum impellers are machined on computer controlled machining centers for a perfect match of blade contour and impeller diameter to your specified operating conditions, resulting in optimum compressor efficiency under all loads.

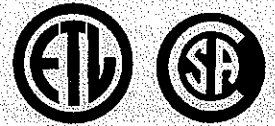
Refrigerant-cooled hermetic motors — High efficiency hermetic motors provide optimum full-load and increased part-load efficiency as a result of the cooler winding operating temperatures inherent in the Carrier hermetic motor design.

Integral thermal economizer — Improved refrigerant cycle efficiency is obtained through the patented Carrier integral thermal economizer. Condensed saturated liquid is metered through precisely sized orifices to the economizer chamber where a portion of the liquid flashes to vapor and is recondensed to a lower saturated temperature and pressure by the cold incoming condenser water. The result is an increased refrigeration effect, less compressor work, and reduced chiller power consumption.

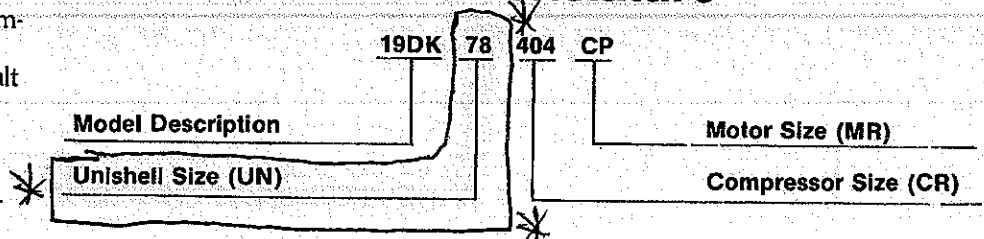
High efficiency tubing — High efficiency heat exchanger tubing with unique external finning dramatically improves refrigerant side heat transfer efficiency while internal enhancement increases water turbulence. This reduces fouling tendencies and increases overall chiller efficiency.

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Model number nomenclature



NOTE: All items contained in this model number description are obtainable from a computerized chiller selection for specific operating conditions

Options and Accessories

ITEM	OPTION*	ACCESSORY†
Marine Water Boxes	X	
Water Nozzles (Victaulic Grooves or Flanges)	X	
Factory-Insulated Cooler, Suction Elbow, Cooler Tubesheets	X	
Hot Gas Bypass	X	
Expanded Services Panel	X	
Data Logging System		X
Soleplates		X

*Factory installed
 †Field installed

Performance data

SELECTION EXAMPLES — ENGLISH

NOMINAL TONS	19DK CHILLER MODELS	
	Medium Efficiency (0.66-0.68 kW/Ton)*	High Efficiency (0.62-0.64 kW/Ton)*
150	19DK50123AE	19DK57123AE
200	19DK55173AE	19DK57173CB
250	19DK61203CC	19DK61203CC
300	19DK65254CL	19DK71253CD
350	19DK65284CP†	19DK73313CL
400	19DK71354CN	19DK73353CM
450	19DK73354CP	19DK78353CN
500	19DK78404CQ	—

NOMINAL TONS	19DM CHILLER MODELS	
	Medium Efficiency (0.64-0.66 kW/Ton)*	High Efficiency (0.60-0.62 kW/Ton)*
150	—	—
200	19DM53205AE	19DM61204AE
250	19DM57255CC†	19DM61254CC
300	19DM61286CE	19DM71285CD
350	19DM65355CL†	19DM71354CL
400	19DM71455CN†	19DM73454CM
450	19DM73505CP†	19DM77454CN
500	—	19DM78505CQ

LEGEND

kW — Compressor motor power input (kilowatts)

*In some instances, the chiller model listed will have an input power consumption per net cooling load that is less than the range indicated
†High Performance (HPT) tubing is used in the condenser

NOTES:

- 1 Motors are 460-3-60
- 2 All heat exchangers are 2-pass and the standard field fouling allowance is employed
- 3 Maximum pressure drop is 33 ft wg
- 4 All units, unless otherwise indicated, have Ultrachill (ULTC) tubing in the cooler and turbochill (TCT5) tubing in the condenser
- 5 Above table is based on the following water conditions:
Cooler: 54 - 44 F
Condenser: 85 F entering water, 3 gpm/ton
- 6 Contact the local Carrier sales office to obtain a computerized selection for other voltages, chiller configurations, or water conditions

* The Carrier chillers 19DK78... are rated with a nominal 500 tons value

SELECTION EXAMPLES — SI METRIC

NOMINAL USRT	kW	19DK CHILLER MODELS	
		Medium Efficiency (0.66-0.68 kW/USRT)*	High Efficiency (0.62-0.64 kW/USRT)*
150	530	19DK50123AD	19DK57113AE
200	700	19DK55173AE	19DK57173CB
250	880	19DK57203CD	19DK57203CD
300	1060	19DK71253CD	19DK71253CD
350	1230	19DK71314CN†	19DK73313CL
400	1410	19DK71314CP†	19DK73313CM
450	1580	19DK73354CP	19DK77353CN
500	1760	19DK78404CQ	—

NOMINAL USRT	kW	19DM CHILLER MODELS	
		Medium Efficiency (0.64-0.66 kW/USRT)*	High Efficiency (0.60-0.62 kW/USRT)*
150	530	—	—
200	700	19DM61254AE†	19DM61254CB
250	880	19DM63286CC†	19DM71285CC
300	1060	19DM65355CD†	19DM71354CD
350	1230	19DM65355CM†	19DM71354CL
400	1410	19DM65455CN†	19DM73454CM
450	1580	19DM73505CP†	19DM76454CN
500	1760	19DM77505CQ†	19DM78505CP

LEGEND

kW — Compressor motor power input (kilowatts)

kW — Capacity (kilowatts)

USRT — United States rated tons

*In some instances, the chiller model listed will have an input power consumption per net cooling load that is less than the range indicated
†HPT tubing is used in the condenser

NOTES:

- 1 Motors are 380-3-50
- 2 All heat exchangers are 2-pass and the standard field fouling allowance is employed
- 3 Maximum pressure drop is 93 kPa wg
- 4 All units, unless otherwise indicated, have ULTC tubing in the cooler and TCT5 tubing in the condenser
- 5 Above table is based on the following water conditions:
Cooler: 12.5 - 7 C
Condenser: 29.5 C entering water, 189 l/s/USRT
- 6 Contact the local Carrier sales office to obtain a computerized selection for other voltages, chiller configurations, or water conditions