

o: 614-222-1330 f: 614-222-1337



September 24, 2013

Ms. Barcy F. McNeal, Secretary Public Utilities Commission of Ohio 180 East Broad Street, 11th Floor Columbus, OH 43215-3716

Re: Case No. 13-1606-EL-EEC, Application to Commit Energy Efficiency/Peak Demand Reduction Programs, Hyatt Regency

Dear Ms. McNeal,

On July 10, 2013 Duke Energy Ohio, Inc. filed an Application to Commit Energy Efficiency/Peak Demand Reduction Programs. It has since come to our attention that savings reported in Attachment 1 were incorrect. Duke Energy Ohio, Inc. respectfully requests that the Commission accept this corrected application.

Please feel free to contact me if there are any questions.

Sincerely,

Elizabeth H. Watts

Associate General Counsel

155 East Broad St

21st Floor

Columbus, OH 43215



13-1606-EL-EEC

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

Case No.: ____-EL-EEC

Mercantile Customer: Hyatt Regency

Electric Utility: Duke Energy

Program Title or

VFD Pumps

Description:

Rule 4901:1-39-05(F), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's existing demand reduction, demand response, and energy efficiency programs for integration with the electric utility's programs. The following application form is to be used by mercantile customers, either individually or jointly with their electric utility, to apply for commitment of such programs in accordance with the Commission's pilot program established in Case No. 10-834-EL-POR

Completed applications requesting the cash rebate reasonable arrangement option (Option 1) in lieu of an exemption from the electric utility's energy efficiency and demand reduction (EEDR) rider will be automatically approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies the application prior to that time. Completed applications requesting the exemption from the EEDR rider (Option 2) will also qualify for the 60-day automatic approval so long as the exemption period does not exceed 24 months. Rider exemptions for periods of more than 24 months will be reviewed by the Commission Staff and are only approved up the issuance of a Commission order.

Complete a separate application for each customer program. Projects undertaken by a customer as a single program at a single location or at various locations within the same service territory should be submitted together as a single program filing, when possible. Check all boxes that are applicable to your program. For each box checked, be sure to complete all subparts of the question, and provide all requested additional information. Submittal of incomplete applications may result in a suspension of the automatic approval process or denial of the application.

Any confidential or trade secret information may be submitted to Staff on disc or via email at <u>ee-pdr@puc.state.oh.us</u>.

Section 1: Mercantile Customer Information

Name: Hyatt Regency

Principal address: 71 South Wacker Drive Chicago, Illinois 60606

Address of facility for which this energy efficiency program applies:

151 West Fifth Street Cincinnati, Ohio 45022

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 Attachment 1 - Appendix 1)

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): April 2012
 - □ 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: 234,125 kWh (See Attachment 1 - Appendix 2)

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

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

Section 4: Demand Reduction/Demand Response Programs

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

April 2012

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

43.2 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.

| | oval. | Option 2 is selected, the application will not qualify for the 60-day automatic All applications, however, will be considered on a timely basis by the ion. |
|----|-------|---|
| 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:

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

> ✓ A cash rebate of \$3,600.00 (See Attachment 1 -Appendix 3).

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 ski | ip Subsection 2) | |

| ✓ | Utility Cost Test (UCT). The calculated UCT values are (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 . | |



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

September 18, 2012

Mr. Darrell Johnson Hyatt Regency 151 West Fifth Street Cincinnati, Ohio 45202

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

Dear Mr. Johnson:

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 \$3600.00 has been proposed for your VFD projects completed in the 2012 calendar year. All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).

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

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

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

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

Sincerely,

Grady Reid, Jr Product Manager Mercantile Self Direct Rebates

cc: Terry Holt, Duke Energy Rob Jung, WECC John Succo, Step Resources

| Rebate is accepted. Rebate is declined. By accepting this rebate, Hyatt Regency 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, Hyatt Regency 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, Hyatt Regency 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): Handle Printed Name Date | Please indicate your response to this rebate offer within 30 days of receipt. |
|--|--|
| efficiency projects listed on the following pages into Duke Energy's peak demand reduction, demand response and/or energy efficiency programs. Additionally, Hyatt Regency 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, Hyatt Regency 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): | Rebate is accepted. |
| 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, Hyatt Regency 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): | efficiency projects listed on the following pages into Duke Energy's peak demand reduction, |
| 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): | secure approval of this arrangement as required by PUCO and to comply with any information and |
| reduction projects? YES NO If rebate is declined, please indicate reason (optional): Wall James Garage G | project scope, equipment specifications, equipment operational details, project costs, project |
| If rebate is declined, please indicate reason (optional): Hamber Daniel G-27-13 | |
| Warrell John Daviell 6-27-13 | YES NO |
| Customer Signature Printed Name Date Date | If rebate is declined, please indicate reason (optional): |
| | Customer Signature Printed Name Date |

Proposed Rebate Amounts

| Measure ID | Energy Conservation Measure (ECM) | Proposed Rebate Amount |
|---------------|-----------------------------------|---------------------------|
| ECM-1 | VFD Process Pump 30 HP (Qty – 1) | \$600.00 |
| ECM-2 | VFD Process Pump 50 HP (Qty – 1) | \$1000.00 |
| ECM-3 | VFD HVAC Pump 40 HP (Qty – 2) | \$2000.00 |
| Total | | \$3600.00 |

Ohio Public Utilities Commission

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

| | No.:EL-EEC | 13-1606-EL-EEC | |
|----------------|---|---|-------|
| Day that: | | ccording to law, deposes and says | |
| 1. | I am the duly authorized representative of: Hyatt Regon 9 Cy Cincinula [insert customer or EDU company name and any applications of the company name and applications of the company | able name(s) doing business as] | |
| 2. | I have personally examined all the informal application, including any exhibits and attachment and inquiry of those persons immediately information contained in the application, I be accurate and complete. | nents. Based upon my examination y responsible for obtaining the | |
| 3. Max Signat | I am aware of fines and penalties which may be Code Sections 2921.11, 2921.31, 4903.02, 4903 false information. Management of Affiant & Title | 3.03, and 4903.99 for submitting | |
| 2013 | and subscribed before me this 27 day of | Junc, Adam Bu 305 - Banke /No Print Name and Title | ,tare |
| Му со | ommission expires on 9-13-17 | Adam M. Burgess Notary Public, State of C My Commission Expires 09- | Ohio |

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 \$100,988.73 (See Attachment 1 - Appendix 5).

The utility's program costs were \$2,478.77(See Attachment 1 - Appendix 6).

The utility's incentive costs/rebate costs were \$3,600 (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.

Attachment 1 - Hyatt Regency

Appendix 1 - Electric History

| 35600842 01 | | |
|----------------------|------|------------|
| HYATT REGENCY CINTI | | |
| 151 5TH W | | |
| CINCINNATI, OH 45202 | | |
| Date | Days | Actual KWH |
| 7/23/2012 | 32 | 753,284 |
| 6/21/2012 | 30 | 612,134 |
| 5/22/2012 | 29 | 534,213 |
| 4/23/2012 | 32 | 531,831 |
| 3/22/2012 | 29 | 453,728 |
| 2/22/2012 | 29 | 502,440 |
| 1/24/2012 | 34 | 567,077 |
| 12/21/2011 | 30 | 489,044 |
| 11/21/2011 | 31 | 526,734 |
| 10/21/2011 | 29 | 529,154 |
| 9/22/2011 | 30 | 623,924 |
| 8/23/2011 | 29 | 669,430 |
| Total | | 6,792,993 |

Appendix 2 – Annual kWh losses and annual KW losses

| 1. Annual savings | | | | · · · · · · · · · · · · · · · · · · · | · · · · · · · · · · · · · · · · · · · | |
|--|-------------------|--------------------|--|---|--|----------------------------------|
| Measure | Measure Amount | Unit of Measure | Annual kWh Gross with losses (per unit) | TOTAL Annual kWh Gross with losses | Saved Summer coincident kW with losses Per Unit | Total KW Gross with losses |
| SelfDirect Motors Pumps and Drives - | | | <u> </u> | | | |
| SelfDirect VFD Process Pump - SelfDirect | | | | | | |
| Pump 1-50 HP | 30 | HP | 1025 | 30743 | 0.22 | 6.6 |
| SelfDirect Motors Pumps and Drives - | | | | T | | |
| SelfDirect VFD HVAC Pump - SelfDirect | | | | | 1 | |
| Pump 1-50 HP | 50 | HP | 1025 | 51239 | 0.22 | 11 |

| Existing Energy kWh (Per Unit) | New Energy kWh (Per Unit) | kWh Savings (Per Unit) | Total kWh Savings | Existing Demand-kW (Per Unit) | New Demand (Per Unit) | Coincident kW Savings (Per Unit) | Total kW Savings |
|-----------------------------------|------------------------------|---------------------------|----------------------|-------------------------------------|-----------------------------|--|---------------------|
| 2,236 | 1,279 | 957 | 28,719 | 0,61 | 0.35 | 0.26 | 7.80 |
| 2,236 | 1,279 | 957 | 47,865 | 0.61 | 0.35 | 0.26 | 13.01 |

| Measure | Measure Amount | Unit of Measure | Annual kWh Gross with losses (per unit) | TOTAL Annual kWh Gross with losses | Saved Summer coincident kW with losses Per Unit | Total KW |
|---|-------------------|--------------------|--|---|--|----------|
| | | | THE CONTRACT OF THE CONTRACT O | | | |
| SelfDirect Motors Pumps and Drives - SelfDirect VFD HVAC Pump - SelfDirect Pump 1-50 HP | 40 | HP | 3804 | 152,144 | 0.64 | 25.60 |
| Total | 120 | TIF | 3004 | 234,125 | 0.64 | 43.20 |

| Existing Equipment Assumptions | New Equipment Assumptions | Annual kWh Savings Per Measure | Coincident Annual KW Savings Per Measure | Total kWh Savings | Total Coincident kW Savings |
|---|---|--------------------------------------|---|----------------------|--------------------------------------|
| Base efficiency is assumed to be a constant volume pump. A market average of building types and HVAC air distribution schemes are | New efficiency is assumed to be a variable volume pump with VFD. A market average of building types and HVAC air distrubition | 0.7.0 | | | |
| assumed | schemes are assumed. | 3,540 | 0.64 | 141,618 | 25.58 |
| | | | | 218,202 | 46.40 |

Appendix 3 – Cash Rebate

| Measure | Amount |
|--|---------|
| SelfDirect Motors Pumps and Drives - | |
| SelfDirect VFD Process Pump - SelfDirect | |
| Pump 1-50 HP | \$600 |
| SelfDirect Motors Pumps and Drives - | |
| SelfDirect VFD Process Pump - SelfDirect | |
| Pump 1-50 HP | \$1,000 |
| SelfDirect Motors Pumps and Drives - | |
| SelfDirect VFD HVAC Pump - SelfDirect | |
| Pump 1-50 HP | \$2,000 |
| Total | \$3,600 |

Appendix 4 – Utility Cost Test

| Measure | UCT |
|--|-------------|
| SelfDirect VFD Process Pump - SelfDirect | |
| Pump 1-50 HP | \$ 16.73 |
| SelfDirect Motors Pumps and Drives - | |
| SelfDirect VFD Process Pump - SelfDirect | |
| Pump 1-50 HP | \$ 16.73 |
| SelfDirect Motors Pumps and Drives - | |
| SelfDirect VFD HVAC Pump - SelfDirect | |
| Pump 1-50 HP | \$ 16.52 |

Appendix 5 – Avoided Supply Costs

| Measure | T&D | Production | Capacity | Quantity | Total Avoided Costs |
|--|---|------------|--|----------|------------------------|
| SelfDirect Motors Pumps and Drives - | | | | | |
| SelfDirect VFD Process Pump - SelfDirect | | | | | |
| Pump 1-50 HP | \$54.04 | \$380.44 | \$130.48 | 30 | \$16,949 |
| SelfDirect Motors Pumps and Drives - | SCA - M. C. and Called and Charles and American and Conference of the Conference of | | | | |
| SelfDirect VFD Process Pump - SelfDirect | | | | | |
| Pump 1-50 HP | \$54.04 | \$380.44 | \$130.48 | 50 | \$28.248 |
| SelfDirect Motors Pumps and Drives - | *************************************** | | in this committee is a second and a second a | | |
| SelfDirect VFD HVAC Pump - SelfDirect | | | | | |
| Pump 1-50 HP | \$91.62 | \$1,019.96 | \$283.23 | 40 | \$55,792 |
| Total | | | | 120 | \$100,988,73 |

Appendix 6 – Utility Program Costs

| Measure | Qty | Admin Costs | Total Costs |
|--|-----|-------------|-------------|
| SelfDirect Motors Pumps and Drives - | | | |
| SelfDirect VFD Process Pump - SelfDirect | | | |
| Pump 1-50 HP | 30 | \$13.77 | \$413 |
| SelfDirect Motors Pumps and Drives - | | | · |
| SelfDirect VFD Process Pump - SelfDirect | | | |
| Pump 1-50 HP | 50 | \$13.77 | \$689 |
| SelfDirect Motors Pumps and Drives - | | | |
| SelfDirect VFD HVAC Pump - SelfDirect | | | |
| Pump 1-50 HP | 40 | \$34.43 | \$1,377 |
| Total | 120 | | \$2,478.77 |

Ohio Mercantile Self Direct Program

Application Guide & Cover Sheet

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

Email this form along with <u>completed Mercantile Self Direct Prescriptive or Custom applications</u>, proof of payment, energy savings calculations and spec sheets to <u>SelfDirect@Duke-Energy.com</u>. You may also fax to 1-513-629-5572.

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 and/or billing history for other utilities as required):

| Account Number | Annual Usage | Account Number | Annual Usage |
|----------------|--------------|----------------|--------------|
| 3560-0842-01-1 | 7,392,759 | | |
| | | | |
| | | | |
| | | | |

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

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

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

| Treads stroom sacri box to intalcate | , 001 | ipiodon of the lenowing progr | an roganomonto. | |
|--------------------------------------|-------|-------------------------------|-----------------|-----------------------------|
| | | Proof of payment.* | | ☐ Energy model/calculations |
| application(s) are completed | 3837 | | | and detailed inputs for |
| | | | | Custom applications |

^{*} 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 |
|--|---|---|--|
| a modela | MSD Custom Part 1 | MSD Prescriptive Lighting | MSD Prescriptive Lighting |
| Lighting | Custom Lighting Worksheet | MSD Custom Part 1 ☐ Custom Lighting Worksheet ☐ | MSD Custom Part 1 |
| Heating & Cooling | MSD Custom Part 1 | MSD Custom Part 1 | MSD Prescriptive Heating & Cooling |
| | MSD Custom General Worksheet | MSD Custom General Worksheet | MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐ |
| Window Films, Programmable Thermostats, & Guest Room Energy Management Systems | MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐ | MSD Prescriptive Heating & Cooling | MSD Custom Part 1 ☐ MSD Custom General and/or EMS Worksheet(s) ☐ |
| Chillers & Thermal | | | MSD Prescriptive Chillers & Thermal Storage ☐ |
| Storage | MSD Custom General Worksheet | MSD Custom General Worksheet | MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐ |
| Chiller Tune-ups | MSD Prescriptive Chiller Tune-ups | MSD Prescriptive Chiller Tune-ups | MSD Prescriptive Chiller Tune-ups |
| Motors & Pumps | MSD Custom Part 1 | MSD Custom Part 1 🔲 | MSD Prescriptive Motors, Pumps & Drives |
| Š., v | MSD Custom General Worksheet | MSD Custom General Worksheet | MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐ |
| VFDs | Not Applicable | MSD Prescriptive Motors, Pumps & Drives ⊠ | MSD Custom Part 1 🔲 |
| ~ | | MSD Custom Part 1 ☐ MSD Custom VFD Worksheet ☐ | MSD Custom VFD Worksheet |
| | MSD Custom Part 1 | MSD Custom Part 1 | MSD Prescriptive Food Service |
| Food Service | MSD Custom General Worksheet | MSD Custom General Worksheet | MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐ |
| | MSD Custom Part 1 | MSD Custom Part 1 | MSD Prescriptive Process |
| Air Compressors | MSD Custom Compressed Air Worksheet □ | MSD Custom Compressed Air Worksheet □ | MSD Custom Part 1 ☐ MSD Custom Compressed Air Worksheet ☐ |
| The State of the S | MSD Custom Part 1 | MSD Prescriptive Process | MSD Custom Part 1 ☐ |
| Process | MSD Custom General Worksheet | MSD Custom Part 1 ☐ MSD Custom General Worksheet ☐ | MSD Custom General Worksheet |
| Energy Management Systems | MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐ | MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐ | MSD Custom Part 1 ☐ MSD Custom EMS Worksheet ☐ |
| Behavioral*** & No/Low Cost | 17 A 2 21 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 | MSD Custom Part 1 | |

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

^{**} 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 Premium Motor/Pump/VFD Incentive Application

Questions? Call 1-866-380-9580 or visit www.duke-energy.com. Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-629-5572.

| Is this application | ⊠ NI | EW (original) or 🔲 RE | VISED (change | s made to or | riginal appl | cation) | | |
|---|--------------|--|-----------------------|----------------|----------------|-------------------------|----------------|--|
| Building Type – Required (check | one) | | | | | | | |
| ☐ Data Centers | | ☐ Full Service Restar | urant | | ☐ Office | 9 | | |
| ☐ Education/K-12 | | ☐ Healthcare | ☐ Healthcare | | | c Assembly | | |
| ☐ Education Other | ☐ Industrial | | | ☐ Publi | c Order/Safety | | | |
| ☐ Elder Care/Nursing Home | | | | | Relig | ious Worship/Ch | nurch | |
| ☐ Food Sales/Grocery | - 1: | Retail (Small Box) | | | ☐ Servi | ce | | |
| ☐ Fast Food Restaurant | | ☐ Retail (Big Box) | | | ☐ Ware | house | | |
| Other: | | | | | | | | |
| How did you hear about the progr | am? (ch | neck one) | | | | | | |
| ☑ Duke Energy Representative | | ☐ Web Site | | | Radio |) | | |
| Contractor / Vendor | | Other | | | | ****** | | |
| | | | | - | 1 | | | |
| Please check each box to indicate c | | | | 1 C - | | M 0 : : | * | |
| All sections of application | | pice with make, model nber, quantity and | ☐ Tax ID num | per for pay | ee | Customer/v Terms and | | |
| | | ipment manufacturer | | | | ronno anu | Conditions | |
| | | | | | | | | |
| Customer Information | | | | | | | | |
| Customer/Business | | legency | Contact | Contact | | | son | |
| Phone | 151363 | | Account Nur | Account Number | | | 3560-0842-01-1 | |
| Street Address (Where incentive sho | · | | 151 West Fifth Street | | | | | |
| City | Cincinn | nati | State | State Ohio | | Zip Code | 45202 | |
| Installation Street Address | 151 We | set Fifth Street | | | | | | |
| City | Cincinn | nati | State | ite Ohio | | Zip Code | 45202 | |
| E-mail Address | | johnson@hyatt.com | | | | | | |
| *Failure to provide the account number | er associ | ated with the location where | the installation | took place v | will result | in rejection of the | e application. | |
| Vendor Information | | | | | | | | |
| Vendor | | esources | Contact | | | John Succo | | |
| Phone | 513288 | | Fax | | | 5132883288 | | |
| Street Address | | cks Blvd | | | | ···· | · | |
| City where it is the control of the | Fairfeile | d | State | Ohio | | Zip Code | 45014 | |
| E-mail Address | | @stepresources.com | | | | | | |
| f Duke Energy has questions abo | ut this a | pplication, who should w | re contact? | ⊠ Cus | tomer | ☐ Vendo | r | |
| Payment Information | | | | T | | | | |
| Who should receive incentive payme | | □ Customer □ | | │ | or (Custor | ner must sign be | elow) | |
| hereby authorize payment of incendirectly to the vendor: | ŀ | Customer Signature (writte | en signature) | | ···· | | | |
| | | Date | | 8/15/2012 | | | | |
| Provide Tax ID Number for Payee | · · | Customer Tax ID # | | 94164912 | | him | | |
| | | Vendor Tax ID # | | 20508670 | 09 | | | |
| Former and Conditions | | | | | | | | |
| Terms and Conditions | T | 0 | <u> </u> | | | | | |
| have read and hereby agree to the | rerms & | Conditions and Program F | | / | <u> </u> | 1 | | |
| Customer Signature | | | Vendor Signat | | -Ah | frace | | |
| Date 8/15/2014 | وم المعاطوة. | ! | Date | 8 | 1/15/2014 | , | | |

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.

Title

Éngineer

Title

General Manager



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

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

| | acement of existing equipme | لــا nt or repla | acement of | | | | for Self Dire | ct Custom p | orogram. | | | | | |
|--------|-----------------------------|---------------------|--------------|----------------------------|-----------|----|-------------------------------------|--|-------------------|--|--------------------|--|--|--|
| Motor | Viotor | | | | | | | | | | | | | |
| Motor | Make/Model or Catalog # | Quantity | Туре | RPM | Incentive | HP | Installed Nominal Efficiency* | Annual Operating Hrs (Minimum of 2000) | Equipment Cost | Date Installed and Operable (mm/yy) | Total Incentive | | | |
| 1-5 HP | | | ☐ OPEN☐ TEFC | ☐ 1200 ☐ 1800 ☐ 3600 | i | HP | % | Hrs | | | | | | |

HP

HP

HP

%

%

Hrs

Hrs

Hrs

☐ 1200 \$4/HP ☐ 1800 ☐ 3600

☐ 1200 \$2.50/HP ☐ 1800 ☐ 3600

OPEN

☐ TEFC

☐ OPEN

TEFC

| 125 – 250 HP | The second of th | ☐ OPEN☐ TEFC | | |
|----------------|--|--------------|--------|--|
| | The state of the s | | □ 3600 | |
| * See page for | our for required efficiency levels | for motor | s. | |

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The Carriers and heleverie /about and a

7.5-20 HP

25-100 HP

- Qualifying motors must be three-phase open drip (ODP) or totally enclosed fan cooled (TEFC) units with nominal speeds of 1200, 1800, or 3600 RPM.
- Efficiencies are to be full-load nominal efficiencies tested in accordance with IEE Standards 112, Method B. Please refer to attached table to determine qualifying efficiencies.
- Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.
- Motor shall be squirrel cage design and conform to NEMA Premium design A, B or C torque characteristics.
- Motor/pump load must be served by Duke Energy and installed in customer's facility.
- Replaced motors shall be disposed of or recycled (not to be resold or rewound).
- Motor(s) and pump(s) must operate a minimum of 2000 hours annually to be eligible.

^{*}Incentive capped at 50% of project cost (equipment and external labor).



The Equipment below is (check one):

New Equipment / New Construction

Early replacement of existing equipment or replacement of failed equipment must apply for Self Direct Custom program.

| _ | | I | | 1 | Τ | T | I | |
|--------|-------------------------|----------|-----------------|---|---|-------------------|--|---|
| Pump | Make/Model or Catalog # | Quantity | Incentive | Installed Nominal Efficiency* (pump curve) | Annual Operating Hrs (Minimum of 2000) | Equipment Cost | Date Installed and Operable (mm/yy) | |
| 1.5 HP | | | \$61.00/PUMP | % | Hrs | | | |
| 2 HP | · · · · | | \$87.50.00/PUMP | % | Hrs | | | |
| 3 HP | V | | \$87.50/PUMP | % | Hrs | | | |
| 5 HP | | | \$85.00./PUMP | % | Hrs | | | |
| 7.5 HP | | | \$124.50/PUMP | % | Hrs | | | *************************************** |
| 10 HP | | | \$82.50.00/PUMP | % | Hrs | | | |
| 15 HP | | | \$145.00/PUMP | % | Hrs | | | |
| 20 HP | | | \$200.00/PUMP | % | Hrs | | | |

^{*} See on page four for required efficiency levels for pumps. Pump curves are required.

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The District of

- Installed equipment must be new. Used, rebuilt or rewound equipment is not eligible.
- Motor/pump load must be served by Duke Energy and installed in customer's facility.
- Pump efficiency is based on the design point on the pump curve. Documentation of the pump curve is required to receive an incentive.
- · The pump efficiency at the design point on the pump curve must meet nominal efficiencies as stated in table on page 4.
- · Duplicative to the first bullet point.

^{*}Incentive capped at 50% of project cost (equipment and external labor).



The Equipment below is (check one):
☐ Retrofit

Replacement of failed equipment or new construction is not eligible for incentives.

Variable Frequency Drives (VFDs) – For Process Fluid Pumping Only (Retrofit* Application only)

Process pumping does not include HVAC or swimming pool fluid pumping systems.

List Process Pumping Application Domestic Water Supply

| VFD** | Make/Model or Catalog # | Quantity | Incentive*** | Annual Operating Hrs (Minimum of 2000) | Project Cost | Date Installed and Operable (mm/yy) | Total Incentive |
|--------|-------------------------|----------|--------------|---|-----------------|---|--------------------|
| 5 HP | | | \$20.00/HP | Hrs | | | |
| 7.5 HP | | | \$20.00/HP | Hrs | | | |
| 10 HP | | | \$20.00/HP | Hrs | | | |
| 15 HP | | | \$20.00/HP | Hrs | | | |
| 20 HP | | | \$20.00/HP | Hrs | | | |
| 25 HP | | | \$20.00/HP | Hrs | | | |
| 30 HP | ACH550 PCR - 045 - 4 | 3 | \$20.00/HP | 8760Hrs | \$99,879. 00 | 04/12 | \$1,800.00 |
| 40 HP | | | \$20.00/HP | Hrs | | | |
| 50 HP | | | \$20.00/HP | Hrs | | | |

*Retrofit only – incentives are only available for new VFDs installed on existing fluid process pump systems.

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

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

50%, 6

Withought in the country of the

- Selection

^{**} VFDs over 50 HP and VFDs on new equipment are not eligible for prescriptive incentives, but may qualify through the custom program. Please refer to the custom webpage for guidance.



| Variab (Retrof | e Frequency Drives (VFDs) – App it* Application only) | lied to HVAC Fans Only | | | | | |
|-------------------|--|------------------------|--------------|---|-----------------|---|--------------------|
| VFD H | /AC Applications (please check one |): | | | | | |
| ☐ Sup | ply Fan | ☐ Cooling Tower Fan | | ☐ Re | eturn Fan | | |
| ☐ Exh | aust Fan | | | | | | |
| VFD** | Make/Model or Catalog # | Quantity | Incentive*** | Annual Operating Hrs (Minimum of 2000) | Project Cost | Date Installed and Operable (mm/yy) | Total Incentive |
| 1.5 HP | | | \$50.00/HP | Hrs | | | |
| 2 HP | | | \$50.00/HP | Hrs | | | |
| 3 HP | | | \$50.00/HP | Hrs | | | |
| 5 HP | | | \$50.00/HP | Hrs | | | |
| 7.5 HP | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | \$50.00/HP | Hrs | | | |
| 10 HP | | | \$50.00/HP | Hrs | | | |
| 15 HP | Parts Got Parts 1 | | \$50.00/HP | Hrs | | | |
| 20 HP | TOTAL OF CONTRACT CONTRACT | | \$50.00/HP | Hrs | | | |
| 25 HP | " | | \$50.00/HP | Hrs | | | |
| 30 HP | 1.3 | | \$50.00/HP | Hrs | | | |
| 10 HP | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | \$50.00/HP | Hrs | | | |
| 50 HP | The second of th | | \$50.00/HP | Hrs | | | |

- Installed equipment must be new. Used, rebuilt or rewound equipment is *not* eligible.
- · Variable Frequency Drive Fans & Pumps qualifying equipment must have 2000 annual run hours or more.
- A 3% impedance reactor on the AC input to the VSD is recommended to prevent damage to the VSD due to overvoltage from power factor
 correction and should be properly sized by your supplier. A 5% reactor may be recommended if there is additional harmonic distortion on
 the AC input lines due to other plant-specific causes.
- VFDs on new equipment do not qualify under this program; but may qualify through the custom program. Please refer to the Custom website for guidance. Incentives will be paid for the installation of **NEW** VFDs on existing fan/pump systems and process equipment only.
- · Replacement of existing VFDs does not qualify for incentives.
- · VFDs installed on redundant pumps do not qualify.

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



| The Equipment below is (cl | :heck one): | |
|----------------------------|-------------|--|
|----------------------------|-------------|--|

Replacement of failed equipment or new construction is not eligible for incentives.

| | e Frequency Drives (VFDs) – Applied* t* Application only) | d to HVAC Pumps Only | | | | | | | | |
|----------|--|----------------------|------------------|---|-----------------|---|--------------------|--|--|--|
| VFD HV | AC Applications (please check one): | | | | | | | | | |
| ☐ Chille | ed Water Pump | ⊠ Condenser Pump | □ Hot Water Pump | | | | | | | |
| VFD** | Make/Model or Catalog # | Quantity | Incentive*** | Annual Operating Hrs (Minimum of 2000) | Project Cost | Date Installed and Operable (mm/yy) | Total Incentive | | | |
| 1.5 HP | | | \$50.00/HP | Hrs | | | | | | |
| 2 HP | | | \$50.00/HP | Hrs | | | | | | |
| 3 HP | | | \$50.00/HP | Hrs | | | | | | |
| 5 HP | | | \$50.00/HP | Hrs | | | | | | |
| 7.5 HP | | | \$50.00/HP | Hrs | | | | | | |
| 10 HP | | | \$50.00/HP | Hrs | | | | | | |
| 15 HP | | | \$50.00/HP | Hrs | | | | | | |
| 20 HP | ABB-ACH550VCR-031A | 2 | \$50.00/HP | 5015Hrs | 70850 | 04/12 | 2000 | | | |
| 25 HP | Marca. Gur Statistica a | | \$50.00/HP | Hrs | | | | | | |
| 30 HP | g State of the sta | | \$50.00/HP | Hrs | | | | | | |
| 40 HP | The second secon | | \$50.00/HP | Hrs | | | | | | |
| 50 HP | 1.00 | | \$50.00/HP | Hrs | | | | | | |
| | it only – incentives are only availab | | | | | fy through the c | uetom | | | |

**VFDs over 50 HP and VFDs on new equipment are not eligible for prescriptive incentives, but may qualify through the custom program. Please refer to the custom webpage for guidance.

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

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



Efficiencies for Premium Motor/Pump Measures

Service Control of the Control of th

| Nominal Ef | fficiencies for "NEMA Pren | nium" Inductior | Motors Rated 600 | volts or less (rando | m wound) | |
|------------|----------------------------|-----------------|------------------|----------------------|---------------------|----------|
| | | Open Drip Pro | oof | | Totally Enclosed Fa | n-Cooled |
| HP | 1200 RPM | 1800 RPM | 3600 RPM | 1200 RPM | 1800 RPM | 3600 RPM |
| 1 | 82.5 | 85.5 | 77.0 | 82.5 | 85.5 | 77.0 |
| 1.5 | 86.5 | 86.5 | 84.0 | 87.5 | 86.5 | 84.0 |
| 2 | 87.5 | 86.5 | 85.5 | 88.5 | 86.5 | 85.5 |
| 3 | 88.5 | 89.5 | 85.5 | 89.5 | 89.5 | 86.5 |
| 5 | 89.5 | 89.5 | 86.5 | 89.5 | 89.5 | 88.5 |
| 7.5 | 90.2 | 91.0 | 88.5 | 91.0 | 91.7 | 89.5 |
| 10 | 91.7 | 91.7 | 89.5 | 91.0 | 91.7 | 90.2 |
| 15 | 91.7 | 93.0 | 90.2 | 91.7 | 92.4 | 91.0 |
| 20 | 92.4 | 93.0 | 91.0 | 91.7 | 93.0 | 91.0 |
| 25 | 93.0 | 93.6 | 91.7 | 93.0 | 93.6 | 91.7 |
| 30 | 93.6 | 94.1 | 91.7 | 93.0 | 93.6 | 91.7 |
| 40 | 94.1 | 94.1 | 92.4 | 94.1 | 94.1 | 92.4 |
| 50 | 94.1 | 94.5 | 93.0 | 94.1 | 94.5 | 93.0 |
| 60 | 94.5 | 95.0 | 93.6 | 94.5 | 95.0 | 93.6 |
| 75 | 94.5 | 95.0 | 93.6 | 94.5 | 95.4 | 93.6 |
| 100 | 95.0 | 95.4 | 93.6 | 95.0 | 95.4 | 94.1 |
| 125 | 95.0 24.25% | 95.4 | 94.1 | 95.0 | 95.4 | 95.0 |
| 150 | 95.4 | 95.8 | 94.1 | 95.8 | 95.8 | 95.0 |
| 200 | 95.4 | 95.8 | 95.0 | 95.8 | 96.2 | 95.4 |
| 250 | 95.4 | 95.8 | 95.0 | 95.8 | 96.2 | 95.8 |

| Nominal Efficiencies for Pu | mps |
|-----------------------------|--------------------------------------|
| HP | Efficiency |
| 1.5 | efficiency of 65% or more for system |
| 2 | efficiency of 65% or more for system |
| 3 | efficiency of 67% or more for system |
| 5 | efficiency of 70% or more for system |
| 7.5 | efficiency of 73% or more for system |
| 10 | efficiency of 75% or more for system |
| 15 | efficiency of 77% or more for system |
| 20 | efficiency of 77% or more for system |



Program Requirements

Incentive Eligibility

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

Terms and Conditions

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



Incentive Application Instructions

IMPORTANT NOTICE

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

- Contact Duke Energy toll free at 866-380-9580 to confirm customer eligibility. Applications are available for download at www.duke-energy.com.
- 2. Review program and equipment requirements on the incentive application. (Page7)
- 3. Purchase and install eligible energy-efficient equipment.
- 4. Complete and submit application for equipment that was installed after 1/1/2008.
- The following items must be included to verify projects. If they are not included, it will delay payment of incentive.
 - A. Itemized invoice for all equipment installed to include:
 - a. Equipment cost
 - b. Quantity per equipment type installed
 - c. Model # for each equipment type
 - d. Manufacturer's data sheet for each equipment model #.
 - B. Make sure the account number provided on the cover page (customer information section) is associated with the location where the equipment was installed. If the account # does not match the address where the equipment was installed, the application will be rejected as ineligible.
 - C. Provide required tax ID# for payee.

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- D. Customer must sign and date the application after reviewing the Terms and Conditions. If customer wishes to assign payment of the incentive directly to the vendor, the customer should circle the appropriate payee in the Payment Information section of the application and sign their name to authorize payment.
- 6. Duke Energy may require site verification of projects that have been self-installed, prior to payment of incentive.
- 8. Email the complete, signed application with all required documents to SelfDirect@duke-energy.com or fax to 513-629-5572.
- 8. A percentage of equipment installations will be site verified for quality assurance purposes. Once selected, a Duke Energy representative will contact the customer to arrange for the inspection. All incentive payments related to the project will be withheld until site verification is complete. There is no charge to the customer for these inspections.



Mercantile Self Direct Incentive Program Requirements for Vendor Participation

Program Overview

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

Vendors can sign up to be on Duke Energy's Web site as a participating Vendor and be added to Duke Energy's e-mail distribution by emailing the Vendor Participation Agreement (VPA) to <u>SelfDirect@duke-energy.com</u> or faxing to 513-629-5572.

Guidelines for Vendor Activities

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

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

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

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



Mercantile Self Direct Rebate Program

| Technology | Responsible for sales and not installs* | Responsible for sales and Installation* | Technology | Responsible for sale and not installs* | Responsible for sales and Installation* |
|---|---|---|---|--|--|
| Lighting | | | Thermal Storage | | |
| Heating Ventilation & Cooling | | | Pumps/Motors/VFDs | | |
| Food Service | | | Chillers | | |
| Water Heating | | | Refrigeration | | |
| | | | Window Film | | |
| Process Equipment (air compressors, injection molding, etc.) | | | Window Film | | |
| * Check all that apply | | | | | |
| form must be on file at Duk SelfDirect@duke-energy.co. I have read and understand requirements set forth them accurate to the best of my accurate. I agree that any owill be used for the sole puthat I am responsible for m | om. d the Mercantile Self Dire ein. By signing this agree knowledge. I hereby rep confidential information o | ect Incentive Program ement, I agree to prov resent and warrant tha concerning my custom customer's participation | Requirements for Vend ide my customers with i at the Tax ID and Vendo er, including but not limi n in the Mercantile Self | or Participation, and I nformation and docum or Tax Status provided ted to Duke Energy so Direct Incentive Progr | agree to comply with all nentation that is true and below are true and ervice account information, am. Further, I understand |
| Vendor Federal Tax ID Nu | mber | 205086709 | | | |
| To qualify for Duke Energy purposes must sign and re Incentive applications are particular year for tax filing. your social security number application, As you will not | turn the "Customer cons processed by a third-part Duke Energy and the th or is your federal tax ID n | ent to release persona ty vendor. The third-pa ird-party vendor have umber and you elect r | al information" form ("Co arty vendor is responsibl signed confidentiality a not to sign the Consent I | nsent Form") along w e for mailing the 1099 greement to protect yo | th the application. form at the end of the ur personal information. If |
| Vendor Tax Status | ☐ Corporation | | roprietor | ship | Other |
| | | I.eee | | | |
| Contact me via | ⊠ Phone | ☐ E-Mail | ☐ Mail | | |
| | | Ta. = | | | |
| Company Name | | Step Resources | | | |
| Mailing Address | | 1382 Hicks Bldv | | | |
| City, State, Zip | | Fairfeild, Ohio, 4501 | | | |
| Phone/Fax | 1117 | 5132883288/513288 | 33288 | | |
| Primary E-mail Address | | jsucco@stepresourc | es.ocm | | |
| Secondary E-mail Address | \$ * 1 S Section | | | | |
| Vendor Signature | | John Succo | | | |
| Title | | engineer | | | |
| Print Name | and the second second | John Succo | | | |

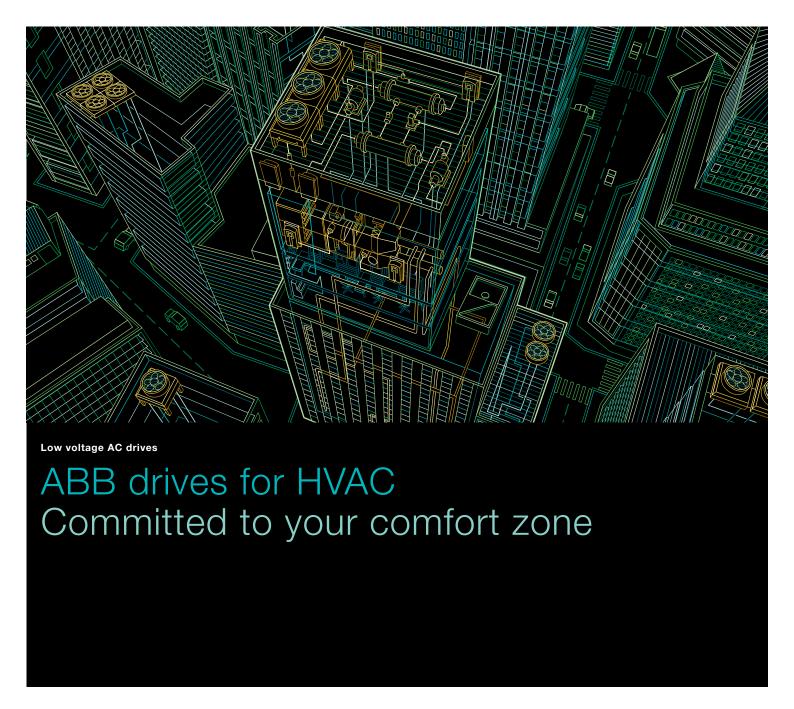
For more information, call 1-866-380-9580 or visit www.duke-energy.com.

Jan and a comment of the

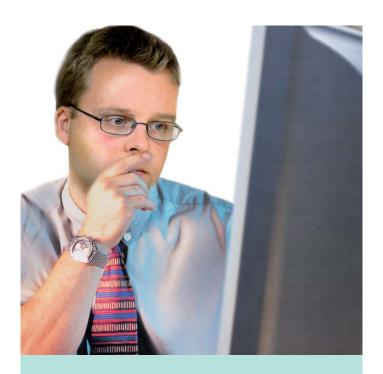
energy more thanks. The state of the second of the second

Date

8/15/2012



Peace of mind as standard



Design engineer

"We specify ABB drives and have them running in more than 3,000 buildings. Their simplicity and reliability allow me to concentrate on my job without having to worry about the HVAC installation."

"When I call ABB, I know I get the right answer."

"With ABB's energy saving tools, I can prove that the money saved helps justify the investment. Some people like the general idea of saving energy, some people want to go into the smallest detail. Either is possible with the ABB drive for HVAC."

"I don't have to look for external components like timers and PID controllers and then worry about their compatibility."

"The ABB drive for HVAC does precisely what it is engineered to do - when the building gets hot the drive delivers air flow to suit."

"The documentation for the ABB drive for HVAC is simple and clear to understand. For the first time in a long while I never get calls from our personnel on site."

"Once the ABB drive for HVAC is installed, that's the last time I hear about it."

"Override is an invaluable function that minimizes the number of components and facilitates my job."

Keeps you out of trouble

- EMC filters for building sector, class C2 (1st environment).
- Meets mandatory harmonic current standard EN 61000-3-12.
- Coated electronic boards improve reliability and extend the life-time of the drive.
- Ambient temperature up to 50 °C.

Override

Override can be used, for example, during a fire for extracting fumes rapidly and efficiently from a building. When override is activated the drive operates in a predefined direction at a pre-set speed while ignoring the drive's other control commands and internal protective functions

Real-time clock and calendar

The built-in real-time clock and calendar function provides true time and date stamps to drive events and enables the use of timers. Information is displayed clearly on the control panel. Further, daylight saving times can be easily selected according to different time zones.

Built-in timers

External timer circuits are no longer needed. Built-in timers - utilizing the real-time clock allow starting and stopping the drive or changing the speed, according to the time of day or night. Relay outputs can be operated with timers to control any auxiliary equipment on site.



BACnet MS/TP, N2, FLN and Modbus RTU embedded

Commonly used HVAC communication protocols are embedded into the drive, ensuring that they are always there if you need them. ABB has supplied, to building automation, tens of thousands of drives utilizing serial communications, including more than 30,000 BACnet installations.



Makes your life comfortable

- Multilingual control panel with HELP-button
- 14 HVAC application macros are preprogrammed and selectable without programming.
- A printed user's manual is delivered with each drive.
- Miniature circuit breakers can be used instead of fuses.

Swinging choke - up to 25% less harmonics

ABB's swinging choke lets the drive for HVAC deliver up to 25% less harmonics at partial loads, compared to a conventional choke of equal size.

Main switch as option for local safety

Integrated drive specific disconnect solution for

- easy installation
- easy serviceability
- space savings





Interactive startup assistants

Startup assistants help to commission the drive. Easy step-by-step assistants show how to use the PID controllers, timer functions and serial communications settings.

Tailor-made HVAC software

The ABB drive for HVAC delivers a complete solution with a tailor-made configuration that will save you time and money. For example, actual process values like differential pressure signals can be converted inside the drive and displayed in engineering units like bar, I/s and °C.



Contractor

"A great feature is the startup assistant. It guides me through the startup routine of the drive, very quickly and easily, enabling me to put a less experienced person on the job."

"The ABB drive for HVAC speaks my language - even in full sentences! I save time and money."

"Thanks to smart design, control and power cables are extremely easy to connect."

"The ABB drive for HVAC has all the functionality I need, built-in. So I don't have to check for the order handling to see if all add-ons have been included. One less thing to worry about."

"With the timer function I can leave out building management system (BMS) automation completely on smaller jobs."

"ABB's no-quibble warranty means just that - no questions are asked, so paperwork is kept to a minimum."

Intelligent and intuitive AC drives for improved energy efficiency

ABB drives for HVAC make maintaining a building's comfort zone easy, quick and energy efficient. The drives control the speed of pump, fan and compressor motors used in air handling units, cooling towers, chillers and other heating, ventilation and air conditioning (HVAC) applications. They help reduce the HVAC system's energy consumption by up to 70 percent, and quite often have payback times of less than a year. With more than 500,000 drives for HVAC installed globally, these highly reliable drives with built-in BACnet easily integrate into building management systems. The drives are stocked globally for quick delivery.

The user interface, designed with the simplicity and intuitiveness of a mobile phone, helps make drive startup quick and easy. Configuring the drive to control HVAC applications takes only seconds using the drive's built-in application macros, that come as standard with the drive. The drive's seamless connectivity to building management systems through embedded communication protocols along with the drive's wide range of inputs and outputs make integration into HVAC systems cost efficient and easily adaptable to future upgrades.

The drive is programmed with several HVAC applications, including supply and return fans, cooling tower fans, booster pumps and condensers. The intelligence within the HVAC control panel means that the user is given direct and understandable instructions in clear text at all times.

Harmonics and RFI emissions are major concerns within many HVAC installations. The ABB drive for HVAC fulfils demanding requirements for electromagnetic compatibility. A swinging choke cuts harmonics emissions by up to 25 percent.

Smaller carbon footprint through improved energy efficiency

One of the biggest benefits of using ABB drives for HVAC applications is the energy saving opportunity over fixed speed motors or conventional flow control methods. Rather than have an electric motor running continuously at full speed, an AC drive allows the user to steplessly control the motor speed, depending on the demand.

In HVAC applications, the most of which being pumps and fans, AC drives can cut energy bill as much as 70 percent. As such ABB is a world leader in assessing the energy saving potential within the HVAC sector.

ABB offers energy appraisals coupled with a series of energy saving tools and calculators built-in within drives. Energy appraisals can rapidly determine just where and how much energy can be saved. By reducing the motor speed by 20 percent, power required can be lowered by up to 50 percent. In addition, ABB drives for HVAC offer a return on investment usually within months on the basis of energy savings alone.

For over 30 years ABB has delivered millions of AC drives worldwide. In 2010 these drives cut electricity consumption by 260 TWh (260 000 000 000 kWh). This is equivalent to the average annual consumption of electricity of more than 65 million European households. This corresponds to an average CO_2 emission reduction of 220 million tonne.

A clean standard against dirty electricity - IEC/EN 61000-3-12

The ABB drive for HVAC fulfils IEC/EN 61000-3-12 and carries manufacturer's written statement of compliance. This means security and simplicity for specifying engineers and facility managers.

This European standard sets strict limits for harmonic currents produced by products connected to the electrical network.

Harmonic currents are forms of pollution on the electrical network. The harmonics can cause several undesired effects - flickering lights, failing computers and overheating of electrical equipment.

Ambient temperature up to 50 °C in 24/7/365

Ambient temperatures affect the output performance of each drive. The hotter it is outside - or inside the cabinet in which the drive is installed - the less current the drive can deliver. This means that the designer has to select the drive according to the peak temperature.

To make the selection easier, the identical output current values for both IP21 and IP54 units are available at different ambient temperatures.





Facility managers

"The energy saving capability of the ABB drive for HVAC means it pays back in less than two years. After that the drive provides profit straight to my bottom line. Using ABB's remote access and diagnostics tools gives me realtime proof on the energy savings"

"With the swinging choke taking care of harmonics, I only pay for the electricity that works for me and not for the electricity that just causes losses."

"My system delivers the output I require, when I need it, and especially when it is hot outside."

"Reaction to load change is fast and I only pay for the peak capacity when it is needed."

"I love the HELP button. I call it my panic button - it is always there to guide me."

"The silence of the ABB drive for HVAC is music to my ears."

"In case of an alarm or fault situation, the diagnostic assistant automatically tells me in clear language what to do."

"With built-in and snap-on fieldbusses I'm flexible for all future automation needs."

"The maintenance assistant is another great feature of the ABB drive for HVAC. I simply do not have to worry about when to service the equipment. The drive tells me when it is time to send people to do maintenance."

"ABB will be here in 10 years time and beyond. That is the biggest guarantee you can give me."

Interactive maintenance assistant

Maintenance scheduling no longer requires guesswork. The drive alerts you when maintenance is required based on your individual requirements.

Interactive diagnostic assistant

Should a fault occur, the diagnostic assistant displays, in plain language, possible causes and potential solutions.

Fault logger

The fault logger of the ABB drive for HVAC is especially useful in tracking down drive failures through its use of the real-time clock.

In addition to recording both time and date, the fault logger also takes a snapshot of 7 diagnostic values - like motor speed and output current. You know what happened and when.

Tools for

- calculating energy savings and payback times
- commissioning
- remote access and diagnostics

Noise smoothing

Software function to reduce the audible noise.



Tailor-made control panel for HVAC applications

- Interactive assistants advise on the use of PID (incl. air flow calculation), timers, fieldbus and facilitate commissioning
- HELP button always available
- Up- and downloading of parameters from one drive to
- Easily detachable by hand (both IP21 and IP54)
- Built-in real-time clock
- 18 languages available in one single panel, including Russian, Turkish, Czech, Polish and Chinese

Energy efficiency

- Advanced motor control features, such as flux optimization, help lower energy use. With flux optimization, the magnitude of the flux is controlled according to the actual load. This results in reduced energy consumption and lower noise.
- Built-in calculators monitor energy used and saved in kilowatt-hours and megawatt-hours, as well as show the saving as a monetary value in local currency and as reduced carbon dioxide (CO₂) emissions.

Flange mounting

The drive can be flange-mounted to the side of an air duct or integrated with an air handling unit (AHU). By placing the heat sink of the drive in the air flow, additional cooling is achieved efficiently.

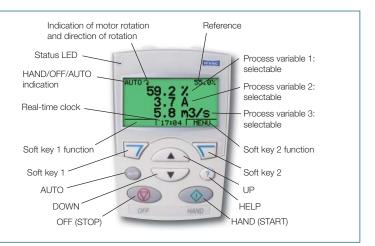
Two PID controllers as standard

The ABB drive for HVAC has two independent PID controllers built in. As an example: one PID controller works with the drive to maintain the duct static pressure. Simultaneously, the other PID controller can be used to control a separate external device, eg, a chilled water valve. All of this can, of course, be monitored and controlled through serial communications.

Mounting side by side

The ABB drive for HVAC is optimized for installing into cabinets: no space is needed between the units, whether IP21 or IP54, even with the covers on.

Motor protection with PTC or PT 100.



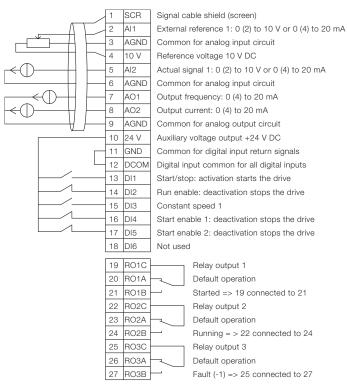
Options

- Relay extension module for three additional outputs (module fits under the cover of the drive)
- BACnet/IP router, LonWorks adapter (LonMark approved) or other option module. Modules fit under the cover of the drive
- Control panel mounting kit for cabinet door mounting
- Output filters, please contact ABB
- External module for remote access and diagnostics



Inputs and outputs

The diagram below shows the inputs and outputs of the ABB drive for HVAC. The sample connections are suitable for a number of HVAC applications like supply and return fans, condensers and booster pumps.



- All inputs and outputs are short-circuit protected.
- All connectors are individually numbered, reducing possible causes of misunderstandings and errors

Technical data

| Supply connection | |
|----------------------------------|--|
| Voltage and power | 3-phase, 380 to 480 V, +10/-15% (0.75 to 355 kW |
| range | 3-phase, 208 to 240 V, +10/-15% (0.75 to 75 kW) |
| | 1-phase, 208 to 240 V, +10/-15% (50% derating) |
| | auto-identification of input line |
| Frequency | 48 to 63 Hz |
| Power factor | 0.98 |
| Efficiency at rated power | r |
| | 98% |
| Motor connection | |
| Voltage | 3-phase, from 0 to $U_{\rm N}$ |
| Frequency | 0 to 500 Hz |
| Rated currents | Current at ambient temperature of -15 to +40 °C: |
| (apply to both IP21 and | rated output current (I _{2N}), no derating needed |
| IP54) | Current at ambient temperature of +40 to +50 °C: derating of 1%/ °C above 40 °C |
| Switching frequency | Selectable |
| Curtoning nequency | 0.75 to 37 kW: 1 kHz, 4 kHz, 8 kHz or 12 kHz |
| | 45 to 110 kW: 1 kHz, 4 kHz or 8 kHz |
| | 132 to 355 kW: 1 kHz or 4 kHz |
| Environmental limits | |
| Ambient temperature | |
| Transportation and | -40 to 70 °C |
| storage | 45 to 50 20 /ro f |
| Operation | -15 to 50 °C (no frost allowed) |
| Altitude Output current | Rated current available at 0 to 1000 m |
| Salpat Sulfelit | reduced by 1% per 100 m over 1000 to 2000 m |
| | 2000 to 4000 m, please consult ABB |
| Relative humidity | Lower than 95% (without condensation) |
| Protection classes | IP21 or IP54 |
| | IP21 for wall mounted and free standing units |
| | IP54 for wall mounted units |
| Inputs and outputs | |
| 2 analog inputs | Selectable both for current and voltage |
| Voltage signal Current signal | 0 (2) to 10 V, $R_{\rm in}$ > 312 k Ω single-ended |
| Potentiometer reference | 0 (4) to 20 mA, $R_{\rm in}$ = 100 Ω single-ended 10 V ±2% max. 10 mA, R < 10 k Ω |
| value | 10 V ±270 max. 10 m/x, 77 < 10 ks2 |
| 2 analog outputs | 0 (4) to 20 mA, load $<$ 500 Ω |
| Internal auxiliary voltage | 24 V DC ±10%, max. 250 mA |
| 6 digital inputs | 12 to 24 V DC with internal or external supply |
| 3 relay outputs | Maximum switching voltage 250 V AC/30 V DC |
| | Maximum continuous current 2 A rms |
| PTC and PT 100 | Any of the 6 digital inputs or analog inputs can be |
| | configured for PTC. Both analog outputs can be used to feed the PT |
| | 100 sensor. |
| Communication | Protocols as standard (RS 485): BACnet MS/TP, |
| | Modbus RTU, N2 and FLN |
| | Available as plug-in options: BACnet/IP router, |
| | LonWorks, Ethernet etc. |
| | Available as an external option: Ethernet adapter for remote monitoring |
| Protection functions | .s. rs.note memoring |
| | Overvoltage controller |
| | Undervoltage controller |
| | Earth-leakage supervision |
| | Motor short-circuit protection |
| | Output and input switch supervision |
| | Overcurrent protection Phase-loss detection (both motor and line) |
| | Underload supervision - can be used also for |
| | belt-loss detection |
| | Overload supervision |
| | |
| | Stall protection |
| Product compliance | |
| Product compliance Harmonics | Stall protection IEC/EN 61000-3-12 |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC |
| Harmonics | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 and |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 and Environmental system ISO 14001 |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 and Environmental system ISO 14001 CE, UL, cUL, and GOST R approvals |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 and Environmental system ISO 14001 |
| Harmonics Standards and | IEC/EN 61000-3-12 Low Voltage Directive 2006/95/EC Machinery Directive 2006/42/EC EMC Directive 2004/108/EC Quality assurance system ISO 9001 and Environmental system ISO 14001 CE, UL, cUL, and GOST R approvals Galvanic isolation according to PELV |

Types and ratings

| P_{N} | I _{2N} | Frame | Type designation |
|----------------------------------|-------------------|--------------------|---------------------|
| kW | A | size | (order code) |
| $U_{\rm N} = 380 \text{ to } 48$ | 30 V (380, 400, 4 | 15, 440, 460, 48 | 0 V) |
| HVAC control | panel and EMC 1 | filter are include | d. |
| 0.75 | 2.4 | R1 | ACH550-01-02A4-4 1) |
| 1.1 | 3.3 | R1 | ACH550-01-03A3-4 1) |
| 1.5 | 4.1 | R1 | ACH550-01-04A1-4 1) |
| 2.2 | 5.4 | R1 | ACH550-01-05A4-4 1) |
| 3 | 6.9 | R1 | ACH550-01-06A9-4 1) |
| 4 | 8.8 | R1 | ACH550-01-08A8-4 1) |
| 5.5 | 11.9 | R1 | ACH550-01-012A-4 1) |
| 7.5 | 15.4 | R2 | ACH550-01-015A-4 1) |
| 11 | 23 | R2 | ACH550-01-023A-4 1) |
| 15 | 31 | R3 | ACH550-01-031A-4 1) |
| 18.5 | 38 | R3 | ACH550-01-038A-4 1) |
| 22 | 45 | R3 | ACH550-01-045A-4 1) |
| 30 | 59 | R4 | ACH550-01-059A-4 1) |
| 37 | 72 | R4 | ACH550-01-072A-4 1) |
| 45 | 87 | R4 | ACH550-01-087A-4 1) |
| 55 | 125 | R5 | ACH550-01-125A-4 1) |
| 75 | 157 | R6 | ACH550-01-157A-4 1) |
| 90 | 180 | R6 | ACH550-01-180A-4 1) |
| 110 | 205 | R6 | ACH550-01-195A-4 1) |
| 132 | 246 | R6* | ACH550-01-246A-4 1) |
| 160 | 290 | R6* | ACH550-01-290A-4 1) |
| 200 | 368 | R8 | ACH550-02-368A-4 |
| 250 | 486 | R8 | ACH550-02-486A-4 |
| 280 | 526 | R8 | ACH550-02-526A-4 |
| 315 | 602 | R8 | ACH550-02-602A-4 |
| 355 | 645 | R8 | ACH550-02-645A-4 |

 $^{^{1)}}$ This type code is valid for the IP21 unit. For the IP54 unit, add +B055 at the end of the code.

Wall mounted units

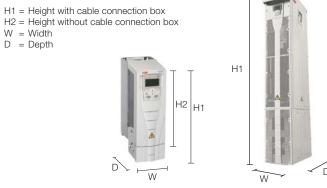
Dimensions

| Frame | Dimei | Dimensions and weights | | | | | | | | | | | |
|-------|--------|------------------------|------|-----|-------------------|------|-----|--------|------|--|--|--|--|
| size | IP21 / | UL ty | pe 1 | | IP54 / UL type 12 | | | | | | | | |
| | H1 | H1 H2 W D Weight | | | Н | W | D | Weight | | | | | |
| | mm | mm | mm | mm | kg | mm | mm | mm | kg | | | | |
| R1 | 369 | 330 | 125 | 212 | 6,5 | 449 | 213 | 234 | 8.2 | | | | |
| R2 | 469 | 430 | 125 | 222 | 9 | 549 | 213 | 245 | 11.2 | | | | |
| R3 | 583 | 490 | 203 | 231 | 16 | 611 | 257 | 253 | 18.5 | | | | |
| R4 | 689 | 596 | 203 | 262 | 24 | 742 | 257 | 284 | 26.5 | | | | |
| R5 | 739 | 602 | 265 | 286 | 34 | 776 | 369 | 309 | 38.5 | | | | |
| R6 | 880 | 700 | 302 | 400 | 69 | 924 | 410 | 423 | 80 | | | | |
| | 986 | 700 | 302 | 400 | 73 | 1119 | 410 | 423 | 84 | | | | |

Free standing units

| Frame | Dimensions | Dimensions and weights | | | | | | | | | | |
|-------|------------|------------------------|-----|-----|--------|--|--|--|--|--|--|--|
| size | H1 | H2 | W | D | Weight | | | | | | | |
| | mm | mm | mm | mm | kg | | | | | | | |
| R8 | 2024 | N/A | 347 | 617 | 230 | | | | | | | |

N/A = not applicable



 $[\]begin{array}{l} I_{\rm 2N} = \ {\rm Nominal\ output\ current\ 1,1\ x\ } I_{\rm 2N} \ {\rm overload\ is\ allowed\ for\ 1\ minute\ every\ 10} \\ {\rm minutes\ through\ the\ entire\ speed\ range}. \end{array}$

continuously at an ambient temperature of 50 °C.

 U_N = Nominal supply voltage

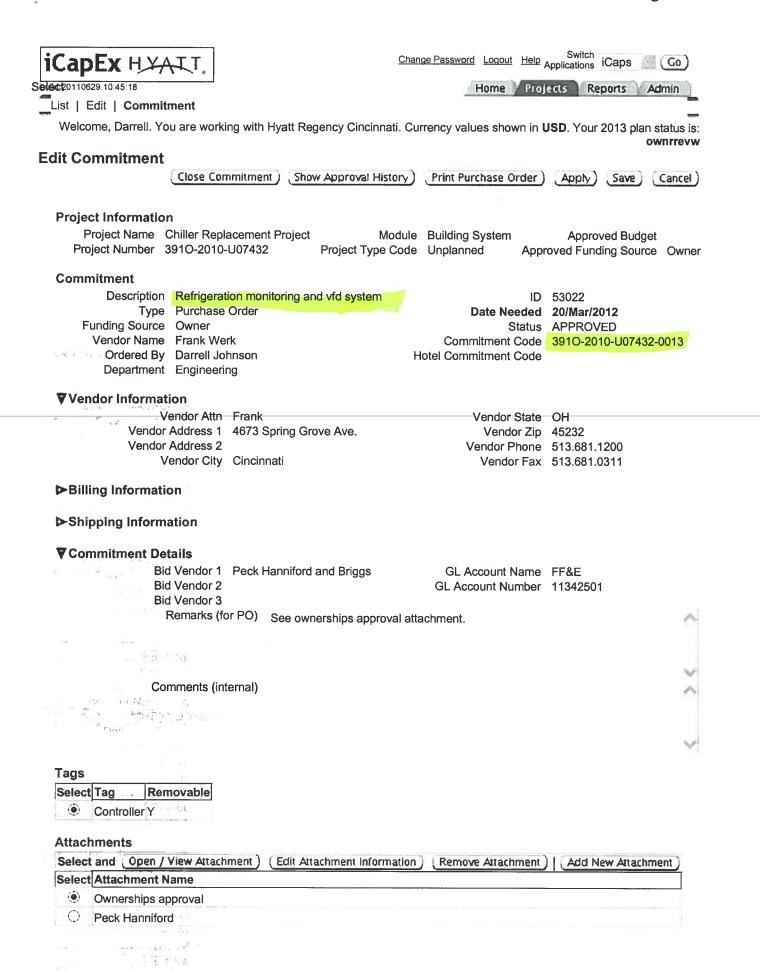
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Contact us

For more information please contact your local ABB representative or visit:

www.abb.com/drives www.abb.com/drivespartners

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Commitment Lines

| Selec | t Details * Description | * Qty | * Unit Price | Ext * Asset Amount Category | * Asset Location | * Asset Type | Depreciate This Asset |
|-------|--------------------------------------|----------|-----------------|--------------------------------|--------------------------------|-----------------|--------------------------|
| • | Show Refrigeration monitoring & vfds | 1 | 70,850.00 | 70,850.00 Buildings | 4th flr mechanincal room | Capitalized | ¥ |
| | Tax Amount 0.00 | | Freight | Amount 0.00 | Total Cor | nmitment Amo | unt 70,850.0 |

▶Payments

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INVOICE

HYATT REGENCY CINCINNATI

INVOICE:

54625

151 WEST FIFTH STREET

INVOICE DATE:

1-31-2012

CINCINNATI, OHIO 45202

CUSTOMER NO .:

HYA035

DESCRIPTION OF SERVICES:

> INSTALLATION OF A REFRIGERANT LEAK DETECTION AND VENTILATION SYSTEM FOR THE FOURTH FLOOR MECHANICAL EQUIPMENT ROOM: 90% COMPLETE.

CONTROL OF CHILLED AND CONDENSER-WATER-PUMPS-FROM-NEW CHILLERS: 75%-COMPLETE:

> INSTALLATION OF VARIABLE FREQUENCY DRIVES ON CONDENSER PUMPS: 75% COMPLETE.

> CONTROL OF TOWER FAN VARIABLE FREQUENCY DRIVES FROM THE NEW CHILLERS: 75% COMPLETE.

> REPLACEMENT OF COOLING TOWER BYPASS VALVES: 90% COMPLETE.

> CONTROL OF TOWER BYPASS VALVES FROM NEW CHILLERS: 75% COMPLETE.

TOTAL PROJECT:

\$70,850.00

THIS PARTIAL INVOICE, 75% OF TOTAL PROJECT: \$53,137.50 . Have $-s(\sqrt{4})^{1/2}$, \cdots , 7

Na History

a e company, e

TERMS: NET 15 DAYS

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REMIT TO: 4673 Spring Grove Ave. Cincinnati, Ohio 45232

INVOICE

FFJE

HYATT REGENCY CINCINNATI 151 WEST FIFTH STREET CINCINNATI, OH 45202 INVOICE NO.: INVOICE DATE: CONTRACT NO.: CUSTOMER NO.:

54625 03/27/12 HYA035

SERVICE LOCATION:

HYATT REGENCY CINCINNATI

DESCRIPTION OF SERVICES:

- > INSTALLATION OF A REFRIGERANT LEAK DETECTION AND VENTILATION SYSTEM FOR THE FOURTH FLOOR MECHANICAL EQUIPMENT ROOM.
- > CONTROL OF CHILLED AND CONDENSER WATER PUMPS FROM NEW CHILLERS.
- > INSTALLATION OF VARIABLE FREQUENCY DRIVES ON CONDENSER PUMPS.
- > CONTROL OF TOWER FAN VARIABLE FREQUENCY DRIVES FROM THE NEW CHILLERS.
- REPLACEMENT OF COOLING TOWER BYPASS VALVES.
- > CONTROL OF TOWER BYPASS VALVES FROM NEW CHILLERS.

TOTAL PROJECT: \$70,850.00

CHANGE ORDERS:

REMOVE CHILLER 3 TOWER STAND
 REPLACE CHILLER 3 MCC SWITCH HANDLE
 UPGRADE SPEED DRIVES TO 20 HP
 \$5,600.00

TOTAL PROJECT INCLUDING CHANGE ORDERS: LESS INVOICE DATED 1-31-12;

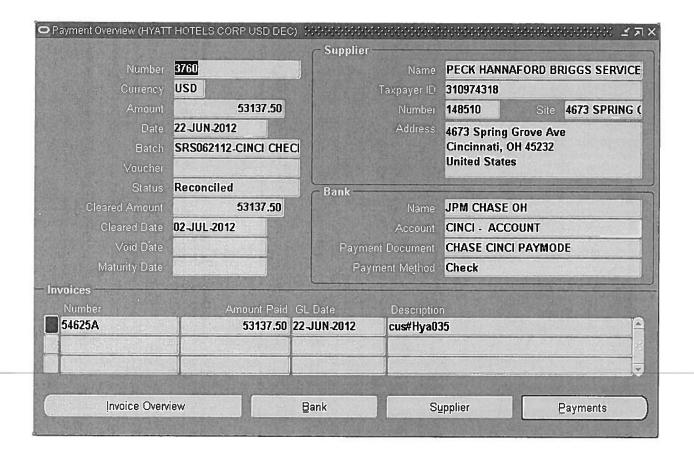
\$76,450.00 \$53,137.50

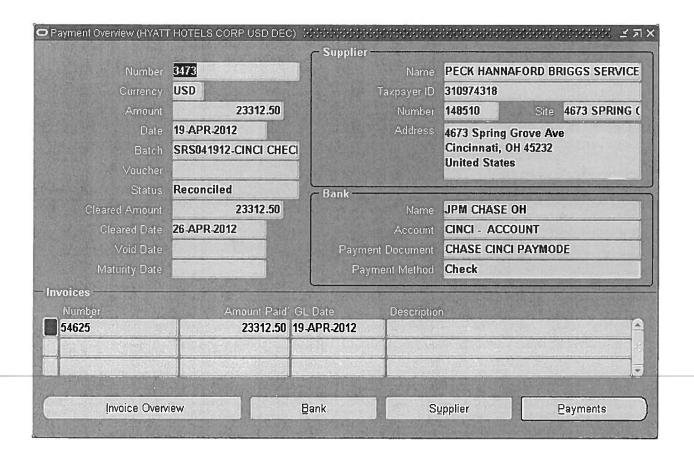
TOTAL THIS INVOICE:

\$23,312.50

TERMS NET 15 DAYS

Equal Opportunity Employer







| Purchase Order No.: 391F-2010-U06848-0001 | Note: All instructions must be followed or merchandise will not be accepted. 1. This order must be acknowledged by executing returning copy within 14 days of receipt. Definite shipping date must be stated with acknowledgement. Definite shipping date must be stated with acknowledgement copy within 14 days of recept of this order that if vendor does not return signed acknowledgement copy within 14 days of recept of this order that vendor has accepted all the terms and conditions as set forth in the purchase order. 2. Do not fill order at higher price than state on purchase order. 3. All deliveries must be accompanied by packing slip. Packing slip must be attached to the outside of and or enton containing packing slip to be clearly marked on outside. 4. Show quantity, description, and this purchase order on all packages. 5. This order is subject to vendor's compliance with applicable sales tax, and such taxes are in addition to purchase prices. 6. All shipping charges are prepaid vendor and added to invoice unless otherwise indicated. | 1. To insure prompt payment, mail invoice snowing purenase order number with one lading to customer (as specified in the "Bill To" address at left). | 8. I RIS OTACE IS SUDJECT TO BIT TETTIS AND CONCUSSION EXTRIBUTA - LETTIS AND CONCUSSORS. | | Price/Total | Unit Price Total | 93783.50 93783.50 | Sub Total 93783.50 Tax 6095.93 Freight 0.00 | Total 99879.43 | Date: | For Internal Use Only: | GL Acct Number: 68.E Purchases GL Acct Number: 0085-12 |
|---|---|--|---|--|---------------------|------------------|---|--|----------------|---|------------------------|--|
| se Order Currency: USD | Order Date: 08-FEB-10 Department: Engineering Date Needed: 12-FEB-10 Date Ordered: 10-FEB-10 Ordered By: Bernard Issa Terms: | Ship To Information: | Company Name: Hyatt Regency Cincinnati Address: 151 West Fifth Street | City, St, Zip: Cincinnati, OH 45202 Attn: 513-579-1234 Fax: 513-354-4039 | MEAR/Purchase Order | Item Description | | | | | | |
| Capital and F&E Expenditure Purchase Order Bill To Information: | Hyatt Corporation, as agent for OH 151 West Fifth LLC, dbba Hyatt Regency Cincinnati ATTN: Hyatt Regency Cincinnati Attn: Acct Payable 151 West Fifth Street Cincinnati, OH 45202 Phone: 513-579-1234 | Vendor Information: | Company Name: Feldkamp Enterprises Inc. 3642 Muddy Creek | City, St, Zip: Cincinnati, OH 45238 Aftn: Pat Heeney Fhone: 513-347-4506 Fax: 513-347-4506 | ntife | Ordered | 1 Booster Pumps For Domestic water System | Remarks: Booster Pumps For Domestic water System | | Accepted by Vendor: Signature(Title): Company Name: Feldkamp Enterpris Shinning Date: | | |

Capital and F&E Expenditure Purchase Order

EXHIBIT A TERMS AND CONDITIONS

In addition to the terms and conditions specified on the face hereof, including but not limited to any special conditions as set forth thereon, and any drawings or specifications referred to thereon, Customer (for its own account or as AGENT, as the case may be) and Vendor, as they are designated in the Purchase Order, shall be subject to and governed by the following terms and conditions. (The terms, conditions, descriptions and specifications in the Purchase Order and in this Exhibit A are hereinafter collectively referred to as the "Contract"):

- "It.—Vendor acknowledges that the personal property covered by the Contract (the "Subject Property") has been ordered by Customer, as Agent for the principal between designated and that the Subject Property is ordered solely for the principal between designated and that the Subject Property is ordered solely for the principal.
- 2. Time is the essence in the Contract. If, in the sole and exclusive judgment of Customer, Vendor has failed or will fail or if the Vendor has refrued or will refuse to expeditiously proceed with delivery and/or installation pursuant to the terms of the Contract, then Customer may terminate the whole or any part of the Contract, provided Customer gives Vendor two days prior written notice of such termination, and purchase elsewhere and hold Vendor accountable for any and all damages sustained by Customer as result of termination.
- 3. Vendor shall maintain adequate books and records so as to be able to segregate and physically identify the Subject Property, including all components thereof. Further, upon total or partial pyrament by Customer to Vendor for the Subject Property, title to all the Subject Property or any portion thereof shall west in Customer and Customer shall have the right to immediate possession thereof. Vendor warrants and represents that when Customer takes title to the Subject Property under the terms and conditions of the Contract, title will be free and clear of all liens and encumbrances. Vendor further agrees to execute any and all documents which Customer docums necessary to effectuate said
- 4. Until such time as the Subject Property or any part thereof has been (i) delivered or installed by Vendor and (ii) accepted by Customer, Vendor hereby assumes the entire risk of loss of the Subject Property or any part thereof from any cause whatsoever. Vendor further agrees that until acceptance by Customer, the loss, damage, or destruction of the Subject Property or any part thereof shall not release Vendor from its obligation to fully perform under the Contract.
- 5. Final inspection and acceptance by Customer shall be at the location of delivery and/or installation such other place as is designated by Customer extensives the right for regiet and/or extensive to look stoket or Vendor's risk, and expense or to hold stoket or Vendor's risk and stopassit, all goods or any part thereof which do not conform to samples or specifications, or which are delivered in quantities different from those ordered hereunder, or if colors and sizes are not in accordance with the written requirements hereof or are in any way contrary to terms and conditions of the Contract, and Customer shall have the right to reject and/or return, in whole or in part, and at the expense of Vendor, any goods not delivered to premises on the delivery date herein set forth.
- 6. During the term of the Contract, Vendor agrees to maintain (i) all risk property damage insurance with limits sufficient to satisfy the requirements as stated in section 4 herein above and (ii) public liability insurance, including but not limited to overage for contractual liability, products liability and breach of warranty both express and implicid and automobile liability insurance with combined single limits of one million dollars (\$1,000,000.00) per occurrence, unless otherwise specified in writing by Customer and (iii) if Vendor is to install subject one million dollars (\$1,000,000.00) per occurrence, unless otherwise specified in writing by Customer and (iii) if Vendor is to install subject this paragraph shall be maintained by Vendor's sole cost and expense and shall name Customer as additional insured thereunder. Evidence of such insurance coverage shall be delivered to Customer within the days from the date of execution of the Contract. If Vendor fails to comply with the provisions of this paragraph, Customer shall have the right to either obtain said insurance on chealf of Vendor a Vendor's sole cost and expense or terminate the Contract. If Customer does secure said insurance, the cost thereof shall be deducted from the purchase price set forth in the Contract. Vendor does hereby agree to indemnify and hold harmless Customer from and against and, at Vendor's sole cost and expense which cost sheetby agree to indemnify and hold harmless Customer on account of any nigury, damage octoss to any person or property of any kind whatsoever arising out of the Contract and the performance or failure to perform pursuant to the many genson or property of any kind whatsoever arising out of the Contract and the performance or failure to perform pursuant to the contract in the mile and the particum and second of any injury, damage or loss to have of the Contract of Vendor, its agents or employees, whether said injury, damage or loss arises before, during or after the installation of
- 7. Vendor agrees to deliver and/or install specified by Customer the Subject Property on or before the delivery date set forth in the Contract, unless Customer designables at date for delivery and/or late than that provided for in the Contract. All provisions herein to the contrary notwitistanding, Vendor shall have the obligation and duty to be informed, by physical inspection or otherwise, as to the progress of work at the installation location and, in the absence of specific instructions from Customer, Vendor shall make delivery and installation and an installation and an installation and in the absence of specific instructions from Customer, Vendor shall make delivery and additivery to a carrier shall not be deemed delivery.
- 8. Final Payment by Customer, less any amounts required by law to be retained by Customer, shall not be due and payable until all the Subject Property to be farmished by Vendor pursuant to the Contract has been fully accepted by Customer. All claims for monites due or to become due from Customer shall be subject to deduction by Customer for any set-off or counter claim arising out of this or any other purchase order of Customer with Vendor.
- 9. Customer or its duly authorized representatives has the rights to examine and inspect all Vendorgs books and records and such other evidence of payment to Vendor for the purpose of verifying the utilization of deposits or accuracy of any invoices received by Customer or compliance by Vendor with the terms and conditions of the Contract.
- 10. Vendor agrees to indemnify and hold barmless Customer, and its successors, assigns, customers and users of its products from any liability, loss, damage, judgments or awards, including but not limited to all costs, expenses and attomysor feer resulting from any actions, claims or proceedings from infringement of any patent purporting to cover the Subject Property or its intended use and of any trade marks appearing with the material on delivery to Customer. Vendor agrees, at its sole cost and experse, to defend Customer and its successors, assigns, customers, agents and users in all such actions, provided that Vendor shall be given prompt notice in writing of all such actions, counsel of its own choice.

- 11. Vendor agrees not to give gratuities or rebates of any nature or form whatsoever to Costomer's employees, consultants, agents or to any of its affiliated entities, whether the gratuity be in the form of a loan or direct gift. Vendor also agrees not to enter into any collusive agreements with any party which would adversely affect Customer.
- 12. The Equal Opportunity Clause in Section 60-1.40, Section 60-250.4, and Section 60-741.4 of Executive Order 11246, as amended, retails to equate inpolyomity and the implementing nutse and regulations of the Office of Federal Contrales Compliance are incorporated herein by apecific reference. Vendor warrants that the Subject Property conforms with the requirements of applicable standards specified by current rules of regulations under the Occupational Safety and Health Act of 1970, and any amendments thereto, and also that the Subject property has not and will not be manufactured in volotion of any federal or state law, the or regulation, including any Child Labor and Wage and Hour Law, Furthermore, Vendor warrants that in all respects it is in compliance with all laws, rules and regulations of all federal, state and local governmental entities, and that it will comply with all covenants set forth in applicable laws.
- 13. Vendor shall not delegate any duties nor assign any rights or claims under the Contract without the prior written consent of Customer. Any such delegation or assignment shall be null, void, and of no effect whatsoever.
- 14. Vendor warrants that the Subject property shall be free from defects of workmanship and material, shall comply with the requirements of the Contract and shall be fit for the purpose intended in the Contract. All warranties shall run in favor of Customer, its successors, and
- d 15. Customer shall have the right to make, from time to time and without notice to any sureties or assignees, changes as to packing, testing, if designations, specifications, designs, and delivery schedules (postponennents only). Vendor shall immediately notify Customer of any d increases or decreases in closis and expenses caused by such changes and an equitable adjustment in price or other terms hereof shall be agreed upon in a written and endment to the Contract.
- 16. In the event of any default by Vendor of any of the provisions of the Contract or misapplication of Customer's finds, then Customer may, in it is sole discretion, terminate the Contract or any part thereof and Vendor shall be liable to Customer for any and all damages resulting directly or indirectly therefrom. Waiver by Customer of any tractach thereof shall not constitute a waiver of any other breach.
- 17. In the event of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Vendor or in the event or appointment, with or without Vendor's consent, of an assignce for the benefit of cuckings or a receiver, then Customer, without any liability on its part Wilakoever, shall be entitled to cancel any part of the Contract which has not been performed.
- 18. Customer shall at all times have title to all drawings and specifications furnished by it to Vendor and intended for use in connection with the Contract. Vendor shall use such drawings and specifications only in connection with the Purchase Order and shall not disclose such drawings and specifications to any person, firm, or corporation, other than government inspectors or the employees or subcontractors of Customer. Vendor shall, upon the request of Customer or upon performance of all terms and conditions of the Contract, promptly return all drawings and specifications to Customer.
- Vendor agrees to pay all costs and expenses, including all attorneys fees and court costs, incurred by Customer in enforcing the terms and conditions of the Contract.
- 20. Vendor specifically warrants that the Subject Property covered by the Contract shall have the appropriate government approvals or testing laboratory certifications and shall conform to local governmental codes applicable to the Subject Property where it is delivered and/or installed.
- 21. All rights and remedies of Customer upon Vendor's breach of the terms and conditions of the Contract are cumulative and nothing contained in the Contract is intended to limit any other rights which Customer may have under law or agreement.
- 22. All rights of the parties under the Contract shall be determined in accordance with the prevailing law of the state in which the Subject Property is delivered and any suit by Vendor under the Contract must instituted and tried in said state.
- 23. The Contract is intended to be the final and exclusive agreement between the parties hereto. Any prior agreements, whether written or oral, between the parties betwee relating to the subject matter of the Contract shall be of no force or effect. There shall be no modifications, alterations, amendments or deviations from the provisions of the Contract without prior written consent of

*Strike if inapplicable

Purchase Order No.: 391F-2010-U06848-0001

Approval History

Capital and F&E Expenditure Purchase Order

| Approval Comment | | | Change funding source from F&E to Owner, then re-submit. | | | 27 | | |
|------------------|--------------------|-----------------------------------|--|--------------------|-------------------------|----------------------------------|--------------------|-------------------------------|
| Tag Name A | | Director of Engineering | Controller | | Director of Engineering | Controller | General Manager | Operations - Engineerin |
| | m | ď | 8 | | | | ff. | |
| Username | Bernard Issa | Bernard Issa | Paul Wilder | Paul Wilder | Bernard Issa | Paul Wilder | Herb Rackliff | Ted Lorenzi |
| Action Taken | SUBMITTED | SKIPPED - Approver s Bernard Issa | REJECTED | SUBMITTED | APPROVED | SKIPPED - Approver s Paul Wilder | APPROVED | FINAL APPROVAL: A Ted Lorenzi |
| pa | 2 | ì | 98 11 12 | 7/1 | | - 1 | | |
| Date Completed | | | | | | | | |
| Date Assigned | 08-FEB-10 11:05:31 | 08-FEB-10 11:05:31 | 08-FEB-10 11:05:31 | 08-FEB-10 12:14:18 | 08-FEB-10 12:14:18 | 08-FEB-10 13:39:42 | 08-FEB-10 13:39:42 | 08-FEB-10 14:57:31 |
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