Ohio | Public Utilities Commission

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

Case No.: 19 -1428-EL-EEC

Mercantile Customer: **American Craft Brewery**

Electric Utility: **Duke Energy**

Program Title or Description: **Upgrade to Regenerative Flash Pasteurizer**

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

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

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

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

Section 1: Mercantile Customer Information

Name: **American Craft Brewery LLC**

Principal address: **1625 Central Pkwy**
Cincinnati, OH 45214-2423

Address of facility for which this energy efficiency program applies:

1625 Central Pkwy
Cincinnati, OH 45214-2423

Name and telephone number for responses to questions:

Andrew Taylor, (317) 838-2096

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

- ✓ The customer uses more than seven hundred thousand kilowatt hours per year at the above facility. (**Refer to Appendix A for documentation**.)
- □ The customer is part of a national account involving multiple facilities in one or more states. (Please attach documentation.)

Section 2: Application Information

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

- □ Individually, without electric utility participation.
- ✓ **Jointly with the electric utility.**

B) The electric utility is: **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)).

Upgrade from non-regenerative to a regenerative type flash pasteurizer, which occurred in April, 2017.

□ Installation of new equipment to replace equipment that needed to be replaced The customer installed new equipment on the following date(s): _____.

□ Installation of new equipment for new construction or facility expansion. The customer installed new equipment on the following date(s): _____.

□ Behavioral or operational improvement.

B) Energy savings achieved/to be achieved by the energy efficiency program:

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

Annual savings: 651,045 kWh
Refer to Appendix B for calculations and supporting document

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

Annual savings: _____kWh

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

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

Annual savings: _____kWh

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

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

Annual savings: _____kWh

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?

The upgrade to a regenerative type flash pasteurizer occurred in April, 2017.

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

182.0 kW
Refer to Appendix B for calculations and supporting documentation.

Section 5: Request for Cash Rebate Reasonable Arrangement (Option 1) or Exemption from Rider (Option 2)

Under this section, check the box that applies and fill in all blanks relating to that choice.

Note: If Option 2 is selected, the application will not qualify for the 60-day automatic approval. All applications, however, will be considered on a timely basis by the Commission.

A) The customer is applying for:

✓ **Option 1: A cash rebate reasonable arrangement.**

OR

□ Option 2: An exemption from the energy efficiency cost recovery mechanism implemented by the electric utility.

OR

□ Commitment payment

B) The value of the option that the customer is seeking is:

Option 1: A cash rebate reasonable arrangement, which is the lesser of (show both amounts):

✓ A cash rebate of **$34,810. Refer to Appendix C for documentation.** (Rebate shall not exceed 50% project cost.

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

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

OR

□ A commitment payment valued at no more than $_____. (Attach documentation and

calculations showing how this payment amount was determined.)

OR

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

Section 6: Cost Effectiveness

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

□ Total Resource Cost (TRC) Test. The calculated TRC value is: _____ (Continue to Subsection 1, then skip Subsection 2)

✓ Utility Cost Test (UCT) . The calculated UCT value is **14.2** (Skip to Subsection 2.) **Refer to Appendix D for calculations and supporting documents.**

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

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

The electric utility's avoided supply costs were _____.

Our program costs were _____.

The incremental measure costs were _____.

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

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

Our avoided supply costs were **$748,239.**

The utility's program costs were **$18,039.**

The utility's incentive costs/rebate costs were **$34,810.**

Refer to Appendix D for calculations and supporting documents.

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.

53203723 01		
AMERICAN CRAFT BREWERY LLC		
1625 CENTRAL PKY		
CINCINNATI, OH 45214		
Date	Days	Actual KWH
4/5/2019	29	327,506
3/7/2019	29	294,824
2/6/2019	29	307,922
1/8/2019	34	344,097
12/5/2018	33	392,222
11/2/2018	29	332,294
10/4/2018	29	402,934
9/5/2018	30	431,533
8/6/2018	31	446,390
7/6/2018	30	404,391
6/6/2018	30	377,302
5/7/2018	31	383,414
Total		**4,444,829**

Appendix B - American Craft Brewery Energy Savings Achieved

	Baseline Used			Post Project Actual				Savings	
	Description	Annual kWh	Summer Coincident kW	Description	Annual kWh	Summer Coincident kW	Hours of Operation	Annual kWh	Summer Coincident kW
ECM - 1	Non-regenerative flash pasteurizer	782,569	219	Regenerative type flash pasteurizer	131,524	37	3,577	651,045	182.0
Notes:	Energy consumption baseline, demand baseline and post project energy consumption basis are outlined in the following pages.								
	After consideration of line losses, total energy savings are **697,920 kWh** and **195.1 summer coincident kW**. These values may also reflect minor DSMore modeling software rounding error.								

Appendix C -Cash Rebate Calculation

American Craft Brewery Regenerative Flash Pasteurizer

Measure	Quantity	Cash Rebate Rate	Cash Rebate
Replace non-regenerative flash pasteurizer with a regenerative type flash pasteurizer	1	50% of incentive that would be offered by the Smart $aver Custom program	**$34,810**
			$34,810

Appendix D -UCT Value

American Craft Brewery Regenerative Flash Pasteurizer

Measure	Total Avoided Cost	Program Cost	Incentive	Quantity	Measure UCT
Regenerative type flash pasteurizer	$748,239	$18,039	$34,810	1	**14.16**
Totals	**$748,239**	**$18,039**	**$34,810**	**1**	

Total Avoided Supply Costs	$748,239	***Aggregate Application UCT***	***14.16***
Total Program Costs	$18,039		
Total Incentive	$34,810		

Smart $aver® Incentive Program
phone: 866.380.9580
fax: 980.373.9755
customprocessing@duke-energy-energyefficiency.com

5/7/2019

Fred Schmuhl
AMERICAN CRAFT BREWERY LLC - 5320372301
1625 CENTRAL PKWY
CINCINNATI OH 45214-2423

Subject: Your Application for a Duke Energy Mercantile Self-Direct Rebate CMO19-0000161727

Dear Fred Schmuhl,

Thank you for your Duke Energy Mercantile Self Direct rebate application. As noted in the Energy Conservation Measure (ECM) chart on page 2, a total rebate of $34,810.00 has been proposed for your project completed in the 2017 calendar years. **All Self Direct Rebates are contingent upon approval by the Public Utilities Commission of Ohio (PUCO).**

At your earliest convenience, please indicate if you accept this rebate by:
- providing your signature on Page 2
- completing the PUCO-required affidavit on Page 3

Please return the documents to my attention via fax at 513.629.5572 or email to customprocessing@duke-energy-energyefficiency.com. Upon receipt, Duke Energy will submit the necessary documentation to PUCO. Following PUCO's approval, Duke Energy will remit payment.

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,

Andrew Taylor
Program Manager
Custom Incentives

cc: Bob Bandenburg

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

☑ Rebate is accepted. ☐ Rebate is declined.

By accepting this rebate, AMERICAN CRAFT BREWERY LLC - 5320372301 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, AMERICAN CRAFT BREWERY LLC - 5320372301 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, AMERICAN CRAFT BREWERY LLC - 5320372301 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

Customer Signature	Printed Name	Date
	Stephen Dixon	5-13-19

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure	Proposed Rebate Amount
ECM-1	Installation of Regenerative Flash Pasteurizer	$34,810.00 per project X 1
	Total	**$34,810.00**

Ohio | Public Utilities Commission

(Mercantile Customers Only)

Application to Commit
Energy Efficiency/Peak Demand Reduction Programs

CM019-0000161727

Case No.: ____-____-EL-EEC

State of OHIO :

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

1. I am the duly authorized representative of:

American Craft Brewery LLC
[INSERT CUSTOMER OR EDU COMPANY NAME AND ANY APPLICABLE NAME(S) DOING BUSINESS AS]

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

3. I am aware offines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

SD, Brewery Superintendent
SIGNATURE OF AFFIANT & TITLE

Sworn and subscribed before me this 4 (DAY) day of June (MONTH), 2019 (YEAR)

SIGNATURE OF OFFICIAL ADMINISTERING OATH

Steve Frederick Notary
PRINT NAME AND TITLE

My commission expires on 1-30-2022
DATE

STEVE FREDERICK - NOTARY PUBLIC
COMM EXP: JAN 30, 2022
STATE OF OHIO

Smart $aver® Incentive Program
phone: 866.380.9580
fax: 980.373.9755
customprocessing@duke-energy-energyefficiency.com

5/7/2019

Fred Schmuhl
AMERICAN CRAFT BREWERY LLC - 5320372301
1625 CENTRAL PKWY
CINCINNATI OH 45214-2423

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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,

Andrew Taylor
Program Manager
Custom Incentives

cc: Bob Bandenburg

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

☐ Rebate is accepted. ☐ Rebate is declined.

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If rebate is accepted, will you use the monies to fund future energy efficiency and/or demand reduction projects? ☐ Yes ☐ No

Customer Signature	Printed Name	Date

Proposed Rebate Amounts

Measure ID	Energy Conservation Measure	Proposed Rebate Amount
ECM-1	Installation of Regenerative Flash Pasteurizer	$34,810.00 per project X 1
	Total	**$34,810.00**

Ohio | Public Utilities Commission

(Mercantile Customers Only)

Application to Commit
Energy Efficiency/Peak Demand Reduction Programs

Case No.: ____-____-EL-EEC

State of _____ :

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

1. I am the duly authorized representative of:

_____
[INSERT CUSTOMER OR EDU COMPANY NAME AND ANY APPLICABLE NAME(S) DOING BUSINESS AS]

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

3. I am aware offines and penalties which may be imposed under Ohio Revised Code Sections 2921.11, 2921.31, 4903.02, 4903.03, and 4903.99 for submitting false information.

_____
SIGNATURE OF AFFIANT & TITLE

Sworn and subscribed before me this _____ day of _____ , _____
DAY MONTH YEAR

_____ _____
SIGNATURE OF OFFICIAL ADMINISTERING OATH PRINT NAME AND TITLE

My commission expires on _____
DATE

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

Ohio Mercantile Self Direct Program

Application Guide and Cover Sheet

Questions? Call 866.380.9580 or visit duke-energy.com.

Email this form along with completed Mercantile Self Direct Prescriptive or Custom applications, proof of payment, energy savings calculations and spec sheets to SelfDirect@Duke-Energy.com. You may also fax to 513.629.5572.

Mercantile customers, defined as using at least 700,000 kilowatt-hours (kWh) annually or having an account in multiple locations are eligible for the Mercantile Self Direct program. Indicate which applies:

- [x] a single Duke Energy Ohio account with 700,000 kWh annual usage
- [ ] an account with multiple locations

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
5326-3723-01-2	12,020,344		

Self Direct rebates are available for completed Custom projects that have not previously received a Duke Energy Smart $aver® Custom Incentive. Self Direct rebates 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 rules allow for, though do not require, certain projects that are Prescriptive in nature under the Smart $aver program to be evaluated using the Custom process in the Self Direct program. Use the list on page two as a guide to determine which Self Direct program best fits your project(s). Apply for Self Direct projects using the appropriate application forms in conjunction with this cover sheet.

Self Direct program rules also allow for behaviorally based and/or no cost and low cost projects to receive rebates.

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

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

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

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

**Behavioral energy efficiency and demand reduction projects must be both measurable and verifiable. Provide justification with your application. Rebates for such projects may be small in magnitude.

Application Type	Prescriptive Measures with Optional Custom Processing	
Heating and Cooling and Window Films, Programmable Thermostats, and Guest Room Energy Management Systems	☐ ENERGY STAR® Window/Sleeve/Room AC ☐ Central Air Unit	☐ Air Source Heat Pump Water Heater
	☐ Setback/Programmable Thermostat ☐ Guestroom Energy Management Control	☐ Window Film
Chillers	☐ Air Cooled Chiller	☐ Water Cooled Chiller
Motors, Pumps and Variable Frequency Drives (VFDs)	☐ VFD – applied to Process Pump ☐ VFD – applied to HVAC Pump	☐ VFD – applied to HVAC Fan
Food Service	☐ ENERGY STAR Hot Food Holding Cabinet ☐ Night Covers for Display ☐ ECM Cooler, Freezer, and Display Case Motors ☐ ENERGY STAR Solid or Glass Door Reach-In Freezer or Refrigerator	☐ Anti-Sweat Heater Control ☐ Cooking Equipment ☐ ENERGY STAR Ice Machine
Process Equipment	☐ Engineered Nozzle – Compressed Air ☐ Air Compressor Equipped with VFD	☐ Pellet Dryer Duct Insulation
Chiller Tune-ups	☐ Air Cooled Chiller tune-up	☐ Water Cooled Chiller tune-up

Please indicate above any Prescriptive energy conservation measures to be evaluated through the Custom process. Only Prescriptive measures listed above are eligible for this option. To receive a Self Direct Custom rebate, a detailed analysis of pre-project and post-project energy usage and project costs must be included in the application.

Although some Self Direct Prescriptive measures are eligible for evaluation through Custom processes, such an approach may not be most effective for certain measures.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

Proposed energy efficiency measures may be eligible for Self Direct Custom rebates if they clearly reduce electrical consumption and/or demand as compared to the appropriate baseline.

Before you complete this application, please note the following important criteria:

- Submitting this application does not guarantee a rebate will be approved.
- Rebates are based on electricity conservation only.
- Electric demand and/or energy reductions must be well documented with auditable calculations.
- Incomplete applications cannot be reviewed; all fields are required.

Refer to the complete list of Instructions and Disclaimers, beginning on page 6.

Notes on the Application Process

If you have any questions concerning how to complete any portion of the application or what supplementary information is required, please contact your Duke Energy Ohio, Inc. account manager or the Duke Energy Self Direct team at 866.380.9580.

Every application must include calculations of the baseline electrical usage and the electrical usage of the proposed high-efficiency equipment/system. These calculations are performed and submitted by the Duke Energy Ohio customer, or your designated equipment vendor / engineer. Application Part 2 worksheets and page 6 of this application contain additional guidance on acceptable calculations. *Complex or unique projects may require the use, at the applicant's expense, of modeling software.* Please contact the Duke Energy Self Direct team with questions about these requirements.

If you do not receive an acknowledgement email within 1 day of submitting an application via online, email, or fax, please call 866.380.9580. The acknowledgement email will provide with an estimated response time based on an initial assessment of your application. The application review may include some communication to resolve any questions about the project or to request additional information. Applications that are received complete without missing information have a faster review time.

There are two ways to submit your completed application form and excel worksheets.

Email: Complete, sign, scan and send this application form and attachments to:
SelfDirect@duke-energy.com (note attachment size limit is applicable)

Fax: 513.629.5572

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

1. Contact Information (Required)

Duke Energy Customer Contact Information[1]					
Company Name (as it appears on your bill)	AMERICAN CRAFT BREWERY LLC				
Address	1625 CENTRAL PKWY STE A 45214				
City	CINCINNATI	State	OH	ZIP Code	45214
Project Contact	FRED SCHMUHL				
Office Phone (513)	412-3243	Mobile Phone	707-372-1292		
Email Address	FREDERICK.SCHMUHL@BOSTONBEER.COM				

Equipment Vendor / Contractor / Architect / Engineer Contact Information					
Company Name					
Address					
City		State		ZIP Code	
Project Contact					
Office Phone		Mobile Phone			
Email Address					

Who is the primary point of contact for technical questions?[2]	

Payment Information					
If an incentive is awarded, who should receive payment?[3] ☒ Customer ☐ Vendor* (customer or customer's agent[4] must sign below) *If the payee is the vendor, they must issue a credit in the amount of the incentive to the customer on the invoice and include it with the payment request.					
Tax ID Number for Payee (provide W-9)	04-3537265				
Mailing Address for Payee (if different from above)					
Street					
City		State		ZIP Code	

[1] Provided customer information should match the Duke Energy customer of record and W-9 form provided with this application. If the customer entity is a business affiliate of the Duke Energy customer of record, documentation must be provided that demonstrates the business affiliation.

[2] Note that if the vendor is the primary point of contact, the customer will still be copied on all application correspondence. If the customer does not wish to be copied, the customer must provide a signed letter of authorization on customer letterhead indicating an entity is acting as an agent for the customer. Duke Energy does not act as an agent.

[3] If payment is to be made to an entity other than the Duke Energy account holder or the vendor, a payment waiver is required and will be provided for customer signature.

[4] If an outside agent is acting on behalf of the Duke Energy customer of record, a letter of authorization on customer letterhead and signed by an authorized employee of the customer must be provided.

Mercantile Self Direct
Nonresidential Custom Rebate Application
PART 1

DUKE ENERGY.

2. Project Information (Required)

A. Please indicate project type:
- ☐ New construction
- ☐ Expansion at an existing facility (existing Duke Energy account number)
- ☐ Replacing equipment due to equipment failure
- ☒ Replacing equipment that is estimated to have remaining useful life of two years or less
- ☐ Replacing equipment that is estimated to have remaining useful life of more than two years
- ☐ Behavioral, operational and/or procedural programs/projects

B. Please describe your project, or attach a detailed project description that describes the project. REPLACED OLD FAILING NON REGENERATIVE FLASH PASTEURIZER WITH A NEW UPGRADED REGENERATIVE SYSTEM

C. When did you start and complete implementation?
Start date / (mm/yyyy) End date / (mm/yyyy)
PURCHASE ORDER ISSUED 09/2016 FOR FLASH PASTEURIZER
PROJECT STARTUP COMPLETED 04/2017

D. Are you also applying for Self Direct Prescriptive rebates and, if so, which one(s)[5]?
NO

E. Please indicate which worksheet(s) you are submitting for this application (check all that apply):
- ☐ Lighting
- ☐ Variable Frequency Drive (VFD)
- ☐ Compressed Air
- ☐ Energy Management System (EMS)
- ☒ General (for projects not easily submitted using one of the above worksheets)

F. List all assumptions about the baseline and proposed equipment energy use and operation schedule, or attach a document listing that information. Attach specification sheets for all proposed new equipment.

G. Attach a supplier or contractor invoice(s) and/or other equivalent information documenting the Implementation Cost for each project listed in your application.
Does the Implementation Cost include any internal labor[6]?
If yes, please specify which costs are internal labor.

---

[5] If your project involves some equipment that is eligible for prescriptive rebates and some equipment that is likely eligible for custom rebates, and if it is feasible to separate the equipment for the energy analysis, then the equipment will be evaluated separately. If it is not feasible to separate the equipment for analysis, then the equipment will be evaluated together in the custom application.
[6] Internal labor costs cannot be counted in the Incremental Project Cost for purposes of analysis.

3. Attestation, Terms and Conditions, and Signature (Required)

Attestation

By signing below, I agree to the following:

I, **(INSERT NAME)** _____, do hereby consent to Duke Energy Ohio, Inc. disclosing my Duke Energy Ohio, Inc. Account Number and Federal Tax ID Number to its subcontractors solely for the purpose of administering Duke Energy Ohio's Mercantile Self Direct Program. I understand that such subcontractors are contractually bound to otherwise maintain my Duke Energy Ohio Inc. Account Number and Federal Tax ID Number in the strictest of confidence.

I have read and agree to the below Terms and Conditions of the Duke Energy Ohio's Mercantile Self Direct Program.

I certify that I meet the eligibility requirements of the Duke Energy Ohio's Mercantile Self Direct Program, as applicable, and that all information provided within my application is correct to the best of my knowledge.

I certify that the taxpayer identification number provided in my application is current and correct. I am not subject to backup withholding because: (a) I am exempt from backup withholding; or (b) I have not been notified by the IRS that I am subject to backup withholding as a result of a failure to report all interest or dividends; or (c) the IRS has notified me that I am no longer subject to backup withholding. I am a U.S. citizen (includes a U.S. resident alien).

Instructions/Terms/Conditions

Note: Please keep for your records

1. Energy service companies or contractors may assist in preparing the application, but an authorized representative of the customer must sign this application to be eligible to participate in the Mercantile Self Direct Program. Completion of this application does not guarantee the approval of a Self Direct Custom Rebate.

2. Once all documentation requested in this application is received by *Duke Energy Ohio, Inc.,* and any follow-up information requested by *Duke Energy* is received, the rebate amount for each Energy Conservation Measure (ECM) will be communicated to the customer. The rebate amount will be based on ECM energy savings and ECM incremental installation cost.

3. All rebates require approval by the Public Utilities Commission of Ohio (PUCO). *Duke Energy Ohio, Inc.* will submit an application for rebate on the customer's behalf upon customer attestation to program terms, conditions and requirements as outlined in the rebate offer letter and upon customer completion of attestation documents required by the Public Utilities Commission of Ohio.

4. *Duke Energy Ohio, Inc.* will issue a Self Direct Custom Rebate check, based on the approved rebate amount for each ECM, upon receiving approval from the PUCO. *Duke Energy* Ohio, Inc. does not guarantee PUCO approval.

5. With the application, the customer must provide a list of all sites where the ECMs were installed. *Duke Energy Ohio, Inc.* requests that sites of similar size, hours of operation and energy consuming characteristics be grouped together in one application for the determination of the rebate amount. The application should identify the site where each unique ECM was installed.

6. Based on the information submitted with the application and the information gathered both before and after the initial installation of the ECM, *Duke Energy Ohio, Inc.* will calculate the rebate amount for each ECM.

7. *Duke Energy Ohio, Inc.* may conduct random site inspections of a sample of the locations where the ECMs are installed to verify installation and operability of the ECMs and to obtain information needed to calculate the Approved Rebate Amount.

8. Customers are encouraged to retain copies of all forms, invoices and supporting documentation for their records.

9. Approved rebates are valid for six months from the date communicated to the customer by *Duke Energy Ohio, Inc.*, subject to the expiration of measure eligibility based on project completion dates and application submission deadlines as defined by PUCO. Customers are encouraged to execute their rebate offer contracts and PUCO-required affidavits promptly to ensure eligibility is not forfeited.

10. *Duke Energy Ohio, Inc.* reserves the right to recover all unrecoverable costs associated with the project approval if the customer decides not to execute the rebate contract, after the project is approved by *Duke Energy Ohio, Inc.*

11. Projects financially supported by other funding sources will be evaluated on a case-by-case basis for potential partial funding from *Duke Energy Ohio, Inc.*

12. Participants must be *Duke Energy Ohio, Inc.* nonresidential, mercantile customers with the project sites in the *Duke Energy Ohio, Inc.* service territory.

13. Customers or trade allies may not use any *Duke Energy* logo without prior written permission.

14. Only trade allies registered with *Duke Energy* are eligible to participate.

15. All equipment must be new. Used or rebuilt equipment is not eligible for rebates. All old existing equipment must be removed on retrofit projects.

16. Unless used for decorative purposes only, all LED lighting products must be present on a current Design Lights Consortium (DLC) or Energy Star qualified product list.

17. Disclaimers: *Duke Energy Ohio, Inc.*
    a. does not endorse any particular manufacturer, product or system design within the program;
    b. will not be responsible for any tax liability imposed on the customer as a result of the payment of rebates;
    c. does not expressly or implicitly warrant the performance of installed equipment (contact your contractor for details regarding equipment warranties);
    d. is not responsible for the proper disposal/recycling of any waste generated or obsolete or old equipment as a result of this project;
    e. 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; and
    f. reserves the right to change or discontinue this program at any time. The acceptance of program applications is determined solely by *Duke Energy Ohio, Inc.*

CUSTOMER SIGNATURE REQUIRED

By signing below, I certify that I have read and agree to the above Mercantile Self Direct Attestation and Terms and Conditions.

Customer Signature	Frederick Schmuhl		
Print Name	FREDERICK SCHMUHL	Date	3/26/19

TRADE ALLY SIGNATURE (REQUIRED ONLY IF TRADE ALLY IS PAYEE)

By signing below, I certify that I have read and agree to the above Mercantile Self Direct Attestation and Terms and Conditions.

Trade Ally Signature			
Print Name		Date	

CUSTOMER – AUTHORIZATION TO DESIGNATE TRADE ALLY AS PAYEE

If an incentive is awarded and the customer would like to authorize payment to the trade ally, the customer must sign below to allow release of their incentive to the trade ally.

Required: Final invoice from trade ally to customer must show the incentive credited to the customer. If the itemized invoice does not reflect a deduction of the incentive amount, the payee will be changed to the customer.

Customer Signature			
Print Name		Date	

List of Sites (Required)

App No.	
Rev.	

Provide a list of sites addressed by this custom incentive application

Site ID (see note 1)	Duke Energy Electric Account Number(s) (see note 2)	Facility Address	List of Proposed Projects at each site	Annual Hours of Operation	Gross Square Footage	Conditioned Square Footage	Facility Age (years)
225	*12345678 01*	*Example: 123 Main Street, Anywhere USA 12345*	*Project Name(s)*	*5,840*	*42,000*	*38,000*	*12*
	5320-3723-01-2	1625 Central Pkwy, Cincinnati, OH 45214	Keg Line Flash Pasteurizer	3,500	133,400	133,400	86

For each project, answer the following questions (use one worksheet per project)

App No.	0
Rev.	0

Project Name: Keg Line Flash Pasteurizer

How would you classify this project? (Place an x in all boxes that apply.)

Lighting		**Heating/Cooling**	x	**Air Compressor**		**Energy Management System**	
VFD		**Motors/Pumps**		**Process Equipment**		**Other, describe below:**	x
						Product cooling after pasteurization	

Brief Project Description

Describe the Baseline Equipment/System (see note 3)	**Describe the Proposed High Efficiency Project**
Non-regenerating Beer/Cider Flash Pasteurizer	**Install Regenerating Beer/Cider Flash Pasteurizer that will allow cold incoming beer to cool hot beer exiting pastuerizer thereby reducing load on plant gycol cooling system.**

If Existing Equipment is the Baseline, how many years of useful life remain or how many years until replacement? 2

Detailed Project Description Attached? Yes (Required)

Operating Hours (see note 4)

	Weekday		Saturday		Sunday		Weeks of Use in Year	Total Annual
24 x 7	**Start Hour**	**End Hour**	**Start Hour**	**End Hour**	**Start Hour**	**End Hour**	**(see note below)**	**Hours of Use**
No	***6:00 AM***	***6:00 PM***	***6:00 AM***	***4:00 PM***	***NA***	***NA***	***52***	***3,500***

If the equipment is not in use 52 weeks during the year (for example, during holiday or summer break), provide an explanation of when usage is not expected and why:

Energy Savings

	Baseline (see note 3)	**Proposed**	**Savings**	**Describe how energy numbers were calculated**
Annual Electric Energy	1,729,175 kWh	290,605 kWh	1,438,570 kWh	Hot beer temperature of 157F used in baseline equipment and Regen 2 Product temperature of 58F from new equipment data sheet cooled to 38F. Also used a plant chiller efficiency of 8.07 EER and new equipment regen factor of 94%
Electric Demand	494 kW	83 kW	411 kW	
Calculations attached	Yes	Yes	(Required)	

Simple Payback

Average electric rate ($/kWh) on the applicable accounts (see note 5)	$0.08		
Estimated annual electric savings	$111,187		
Other annual savings in addition to electric savings, such as operations, maintenance, other fuels	$61,094.00		
Incremental cost to implement the project (equipment & installation) (see note 6)	$554,443.00		
Copy of vendor proposal is attached (see note 7)	Yes		
Simple Electric Payback in years (see note 8)	4.986577788	**Total Payback in years**	3.218246688

SAMUEL ADAMS

Vendor: ALFA

Alfa Laval, Inc.
PO Box 200081
Pittsburgh PA 15251-0081

Purchase Order

PO Number / Date:
45146514 / Sep 26, 2016

Please Deliver To:
Samuel Adams Cincinnati Brewery
1625 Central Park Way
Cincinnati OH 45214

Delivery Date: 01/16/2017
Contact Person: Penn. Cap Assets
Phone Number: 617.368.5000

Term of Delivery:
DDP Cincinnati OH, USA

Email Invoice To:
ap.processing@bostonbeer.com

Please print PO number on all documentation related to this order.

Item	Material	Description	Order Qty	Unit	Price Per Unit	Net Value
00001		FLEXITHERM-VB, Flash Pasteurizer	192,410.000	Each	1.00	192,410.00

FLEXITHERM-VB, Thermal Processing 190 hl/h Flash Pasteurizer

Delivery Time
The standard works dispatch time is 14 working weeks from approval of the order. The delivery time commences from receipt of a commercially and technically clear order and is based on current stock machine availability, to be confirmed with order acknowledgment.

Note: If AL receives BBC order by COB September 29, 2016, AL will have the shipment ready EXW by December 23 2016.
Mode of delivery to be agreed with BBC order, either with included above DDP sea/land, 4 weeks transit time, January 20, 2017 to site from EXW
Or
Optional addition $10,000 more via air/land 2 weeks transit time, January 6 2017 to site from EXW.

Payment Terms
Twenty (20) % down payment with placement of Purchase Order.
Fifty Five (55) % payable upon delivery.
Ten (10) % payable upon documentation milestone
Ten (10) % payable upon Acceptance Certificate signed by BBC
Five (5)% payable upon finial as-build documentation delivery

Signature:_____ **Date:**_____

Acceptance of this purchase order is subject to the Terms and Conditions of Purchase, which are attached hereto and incorporated herein by reference. Seller's performance of any service or provision of any goods pursuant to this purchase order shall be construed as acceptance of such Terms and Conditions unless otherwise specifically agreed to in writing.

Purchase Order

PO Number / Date: *Page*
45146514 / Sep 26, 2016 2

Alfa Laval, Inc.
PO Box 200081
Pittsburgh PA 15251-0081

Item	Material Order Qty Unit	Description	Price Per Unit	Net Value

Net thirty (30) days. Note: All Prices exclude taxes.

Per Quotation: DKSOHK-979 r2 (US)

SACB1624 Keg Line Flash Pasteurizer APV Upgrades

Total Net Value USD 192,410.00

Signature: _____ **Date:** _____

Acceptance of this purchase order is subject to the Terms and Conditions of Purchase, which are attached hereto and incorporated herein by reference. Seller's performance of any service or provision of any goods pursuant to this purchase order shall be construed as acceptance of such Terms and Conditions unless otherwise specifically agreed to in writing.

2.0 FLEXITHERM-VB, THERMAL PROCESSING - DESIGN DATA STANDARD EXECUTION

Beer	Capacity, maximum:	190 hl/h
	Capacity, minimum:	70 hl/h
	CO_2 content, maximum:	5.8 g/l
	Inlet pressure:	200 kPa (minimum)
	Inlet temperature:	2 - 3 °C (nominal)
	Pasteurization temperature:	67 - 76 °C
	Holding time at max capacity:	30 sec
	PU target (selectable):	10 - 100 PU
	Outlet pressure:	200 kPa
	Outlet temperature:	2 - 4 °C
Energy recovery	Regeneration effect:	94%
Heating media	Type:	Steam, dry saturated
	Inlet pressure:	300 kPa
	Approx. heating effect:	155 kW (steam cons. ~260 kg/h)
	Condensates return pressure:	max 100 kPa (when applicable)
Cooling media	Type:	Prop. Glycol, 25%
	Inlet temperature:	-4 °C (circulated)
	Approx. cooling effect:	155 kW (flow rate ~20 m^3/h)
	Pressure drop:	200 kPa (min differential glycol inlet / outlet)
Water/ Deaerated Water	Quality:	Clear, purified and without pathogenic or beer spoiling micro organisms
	Capacity, minimum:	190 hl/h
	Inlet pressure:	> 200 kPa
	Inlet temperature:	max 15 °C
CIP	Capacity, minimum:	190 hl/h
	Inlet pressure:	> 300 kPa
Electric power	Voltage:	3x480 V, 60 Hz
	Installed power:	24 kW
Control panel	Max ambient temperature:	40 °C
Instrument air	Dry and oil free	400 - 600 kPa
Physical dimensions (approximate)	L x W x H:	3.6 x 3.0 x 2.5 m (see Figure 1)
	Weight (static load):	4000 kg
	Dynamic load:	No significant dynamic loads

NEWLY INSTALLED
FLASH PASTEURIZER DATA SHEET

Regenerative APV Utility Savings

Beer Data	
SG	1.01
Vol Flow[1]	135 bbl/h
Vol Flow	4,185 gph
Mass Flow	35,267 lb/h
Cp	0.95 BTU/(lb F)

Brewery Factors	
Yearly Operation (hr)	3500
Steam Costs per BTU[3]	$0.00000438
Electricy Cost per kWh[4]	$0.01920
Chiller Plant Efficiency[5]	8.07 EER
New APV regen[2]	94%

Existing APV Utilities

Inlet Product	34 F
Steam	350 F
Hot Product	157 F
Heat Duty	4,120,966 BTU/h
Hourly cost	$18.05
Yearly cost	$63,174.41

Hot Beer	157 F
Glycol	28 F
Product	38 F
Cooling Duty	3,986,951 BTU/h
Chiller System Power Input	494.05 kW
Hourly cost	$9.49
Yearly cost	$33,199.89

Total:	$96,374.30

Future APV Utilities

Regen 1 Product[2]	133 F
Steam	350 F
Hot Product	157 F
Heat Duty	804,091 BTU/h
Hourly cost	$3.52
Yearly cost	$12,326.71

Regen 2 Product[2]	58 F
Glycol	28 F
Outlet Product	38 F
Cooling Duty	670,076 BTU/h
Chiller System Power Input	83.03 kW
Hourly cost	$1.59
Yearly cost	$5,579.81

	$17,906.53

Yearly Steam Savings	$50,847.69
Yearly Chiller Savings	$27,620.07
Total Yearly Savings	$78,467.77

1 Comparison is based on current APV capacity, proposed APV has flow rate of 265 bbl/h

2 Alfa Laval Data sheet - Temperature from regeneration using specificed plate heat exchanger efficiency for countercurrent flow

3 YTD SACB Energy Costs

4 Historical Industrial average cost for Duke Energy kWh in Cincinnati

5 SACB Chiller data sheet

FROM ORIGINAL PROJECT PAPERS

Regenerative APV Utility Savings

Beer Data	
SG	1.01
Vol Flow[1]	135 bbl/h
Vol Flow	4,185 gph
Mass Flow	35,267 lb/h
Cp	0.95 BTU/(lb F)

Brewery Factors	
Yearly Operation (hr)	3500
Steam Costs per BTU[3]	$0.00000438
Electricy Cost per kWh[4]	$0.07729
Chiller Plant Efficiency[5]	8.07 EER
New APV regen[2]	94%

Existing APV Utilities

Inlet Product	34 F
Steam	350 F
Hot Product	157 F
Heat Duty	4,120,966 BTU/h
Hourly cost	$18.05
Yearly cost	$63,174.41

Hot Beer	157 F
Glycol	28 F
Product	38 F
Cooling Duty	3,986,951 BTU/h
Chiller System Power Input	494.05 kW
Hourly cost	$38.19
Yearly cost	$133,652.03

Total:	$196,826.44

Future APV Utilities

Regen 1 Product[2]	133 F
Steam	350 F
Hot Product	157 F
Heat Duty	804,091 BTU/h
Hourly cost	$3.52
Yearly cost	$12,326.71

Regen 2 Product[2]	58 F
Glycol	28 F
Outlet Product	38 F
Cooling Duty	670,076 BTU/h
Chiller System Power Input	83.03 kW
Hourly cost	$6.42
Yearly cost	$22,462.53

	$34,789.24

Yearly Steam Savings	$50,847.69
Yearly Chiller Savings	$111,189.50
Total Yearly Savings	$162,037.20

1 Comparison is based on current APV capacity, proposed APV has flow rate of 265 bbl/h

2 Alfa Laval Data sheet - Temperature from regeneration using specificed plate heat exchanger efficiency for countercurrent flow

3 YTD SACB Energy Costs

4 Approximate Cost based on 12/18 Duke Energy bill

5 SACB Chiller data sheet

SAVINGS RECALCULATED BASE ON CURRENT ELECTRIC COSTS

This foregoing document was electronically filed with the Public Utilities

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in

Case No(s). 19-1428-EL-EEC

Summary: Application Application to Commit Energy
Efficiency/Peak Demand
Reduction Programs electronically filed by Ms. Emily Olive on behalf of Duke Energy Ohio
and D'Ascenzo, Rocco O. Mr. and Watts, Elizabeth H. Ms.