



# Public Utilities Commission

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

Case No.: 13 - 0064 -EL-EEC

Mercantile Customer: Premix Inc

Electric Utility: The Cleveland Electric Illuminating Company

Program Title or  
Description: HVAC and Air Compressor upgrade for energy efficiency

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

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

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

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

## Section 1: Mercantile Customer Information

Name: Premix Inc.

Principal address: 3365 East Center St, North Kingsville, Ohio 44068

Address of facility for which this energy efficiency program applies: 3365 East Center St, North Kingsville, Ohio 44068

Name and telephone number for responses to questions: Frank Stawicki 440-224-7200

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

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

## Section 2: Application Information

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

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

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

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

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

### Section 3: Energy Efficiency Programs

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

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

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

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

Annual savings: 579735 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. **Please see Exhibit 1 if applicable**

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

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

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

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

## Section 4: Demand Reduction/Demand Response Programs

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

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

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

\_\_\_\_\_

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

68 kW

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

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

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

OR

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



OR

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

### Section 6: Cost Effectiveness

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

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

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

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

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

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

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

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

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

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

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

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

## **Section 7: Additional Information**

Please attach the following supporting documentation to this application:

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





# Public Utilities Commission

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

Case No.: 13 - 0064 -EL-EEC

State of Ohio :

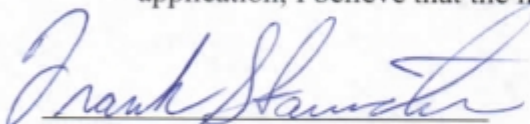
Frank Stawicki, Affiant, being duly sworn according to law, deposes and says that:

1. I am the duly authorized representative of:

Premix Inc.

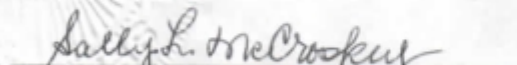
[insert customer or EDU company name and any applicable name(s) doing business as]

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



Signature of Affiant & Title

Sworn and subscribed before me this 14th day of December, 2012 Month/Year



Signature of official administering oath

SALLY L. MCCROSKEY  
Print Name and Title

My commission expires on June 18, 2013

Customer Legal Entity Name: Premix Inc

Site Address: Premix Inc

Principal Address: 3365 East Center Street PO Box 281

Project No.	Project Name	Narrative description of your program including, but not limited to, make, model, and year of any installed and replaced equipment:	Description of methodologies, protocols and practices used in measuring and verifying project results	What date would you have replaced your equipment if you had not replaced it early? Also, please explain briefly how you determined this future replacement date.	Please describe the less efficient new equipment that you rejected in favor of the more efficient new equipment.
1	HVAC Upgrade Project; Phase 1=Unit 3, Phase 2=Unit 21, Phase 3=Units 2 and 38	Phase 1 - Replaced an older 2 ton seer rating of 11, model number 567CJO24 HVAC unit with a new 2 ton seer rating 13, model number 24ABB324AOQ3 unit. Phase 2 - Replaced a HVAC 7.5 Ton EER Rating 11 model number VCDO90B4L with a new HVAC 7.5 Ton EER Rating 13 model number 48TCEAO8A2A60AOAO. Phase 3 - Replaced a HVAC 10 Ton EER Rating 8 model number YBD12OB3H with a new HVAC 10 Ton EER Rating 10 model number 48TCED12A2G5AOBOCO. Replace unit #38 3 ton seer rating 8 with new 3 ton seer rating 10	Please see attached Excel Spreadsheet Primix_KWH&KWCalculations	Replacement would have occurred 2017. Early replacement was determined through reduced maintenance and energy savings options on new equipment.	N/A
2	Air Compressors ,Piping System and Controls Upgrade	We upgraded our complete compressed air system with new compressors , controls and storage tank with new piping. This reduced our electric demand by 100 KW and our KWh 613,200. See Attachments.	Please see attached Excel Spreadsheet Primix_KWH&KWCalculations	Estimated 2020 . The existing equipment was in good operating condition we added tanks for air storage and compressors and controls to have an 100 KW energy reduction. Early replacement was determined through energy saving lower maintenance cost.	N/A

**Exhibit 2**

**Customer Legal Entity Name:** Premix Inc

**Site:** Premix Inc

**Principal Address:** 3365 East Center Street PO Box 281

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (C)	Note 1
2011	12,790,017	12,790,017	12,790,017	
2010	10,916,207	10,916,207	10,916,207	
2009	11,217,879	11,217,879	11,217,879	
<b>Average</b>	<b>11,641,368</b>	<b>11,641,368</b>	<b>11,641,368</b>	

Project Number	Project Name	In-Service Date	Project Cost \$	KWh Saved/Year Counting towards Utility compliance	KWh Saved/Year (D) eligible for incentive	Utility Peak Demand Reduction Contribution, KW	Commitment Payment \$
1	HVAC Upgrade Project; Phase 1=Unit 3, Phase 2=Unit 21, Phase 3=Units 2 and 38	07/21/2012	\$41,060	11,868	11,868	3	
2	Air Compressors ,Piping System and Controls Upgrade	10/31/2012	\$158,219	567,867	567,867	65	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
				-	-	-	
<b>Total</b>				<b>579,735</b>	<b>579,735</b>	<b>68</b>	<b>\$0</b>

**Docket No.** 13-0064

**Site:** 3365 East Center Street PO Box 281

**Savings as percent of usage** 5.0% Note 2

**= Total (D) divided by Average (C)**

**Customer Eligible Exemption Period:** 60 Month(s) Note 3

**Notes**

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

(2) Savings as a percent of usage is equal to the of total project savings (D) divided by the 3 year average Weather Adjusted Usage with Energy Efficiency Addbacks (C).

(3) Customer exemption determined by savings percentage in relation to energy efficiency schedule as set forth in O.R.C. 4928.66(A)(1)(a).

(4) The exemption period reflects the maximum potential exemption period. NOTE: The FirstEnergy Utilities cannot guarantee the length of the exemption period that will ultimately be approved by the Commission.

### Exhibit 3 Utility Cost Test

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh (A)	Utility Avoided Cost \$/MWh (B)	Utility Avoided Cost \$ (C)	Utility Cost \$ (D)	Cash Rebate \$ (E)	Administrator Variable Fee \$ (F)	Total Utility Cost \$ (G)	UCT (H)
1	12	\$ 308	\$ 3,659	\$ 2,025	\$0	\$119	\$ 2,144	1.7
2	568	\$ 308	\$ 175,062	\$ 2,025	\$0	\$5,679	\$ 7,704	22.72
<b>Total</b>	<b>580</b>	<b>\$ 308</b>	<b>178,721</b>	<b>4,050</b>	<b>\$0</b>	<b>\$5,797</b>	<b>9,847</b>	<b>18.1</b>

#### Notes

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

**Premix Inc ~ Premix Inc**  
**Docket No. 13-0064**

**Site:** 3365 East Center Street PO Box 281

## Project Summary

<b>Premix</b>						
<b>Project Number</b>	1 (Phase 1)		<b>Old KW</b>		<b>New KW</b>	<b>Reduced KW</b>
<b>Project</b>	Unit 3 HVAC Upgrade		2.18 (-)		1.85 (=)	<b>0.34</b>
<b>In Service Date</b>	8/10/2010					
<b>In Service Date</b>	6/13/2013		<b>Old KWh</b>		<b>New KWh</b>	<b>Reduced KWh</b>
<b>Unit Cost</b>	\$5,800		4,712.73 (-)		3,987.69 (=)	<b>725.03</b>
<b>Model Old</b>	567CJ024					
<b>Model New</b>	24ABB324A003					
<b>Premix</b>			<b>Old KW</b>		<b>New KW</b>	<b>Reduced KW</b>
<b>Project Number</b>	1 (Phase 2)		8.18 (-)		6.92 (=)	<b>1.26</b>
<b>Project</b>	Replace HVAC Unit #21					
<b>In Service Date</b>	7/21/2012		<b>Old KWh</b>		<b>New KWh</b>	<b>Reduced KWh</b>
<b>Unit Cost</b>	\$13,750.00		17,672.73 (-)		14,953.85 (=)	<b>2,718.88</b>
<b>Model Old</b>	YCDO9OB4L					
<b>Model New</b>	48TCEAO8A2A6OAOAO					
<b>Premix</b>			<b>Old KW</b>		<b>New KW</b>	<b>Reduced KW</b>
<b>Project Number</b>	1 (Phase 3)		14.18 (-)		12.00 (=)	<b>2.18</b>
<b>Project</b>	Replace HVAC Unit #2 and unit 38					
<b>In Service Date</b>	8/10/2010		<b>Old KWh</b>		<b>New KWh</b>	<b>Reduced KWh</b>
<b>Unit Cost</b>	\$21,510		42,120.00 (-)		33,696.00 (=)	<b>8,424.00</b>
<b>Premix</b>			<b>Old KW</b>		<b>New KW</b>	<b>Reduced KW</b>
<b>Project Number</b>	2		165.83 (-)		101.15 (=)	<b>64.67</b>
<b>Project</b>	Air Compressor System and Controls Upgrade					
<b>In Service Date</b>	10/31/2012		<b>Old KWh</b>		<b>New KWh</b>	<b>Reduced KWh</b>
<b>Project Cost</b>	\$158,219.00		1,452,627.00 (-)		884,760.00 (=)	<b>567,867.00</b>
<b>Total Old KW</b>	<b>Total New KW</b>	<b>Total Reduced KW</b>	<b>Total Old KWh</b>	<b>Total New KWh</b>	<b>Total KWh Reduced</b>	
<b>190.37</b>	<b>121.92</b>	<b>68.45</b>	<b>1,517,132.45</b>	<b>937,397.54</b>	<b>579,734.92</b>	

<b>Project Number</b>	<b>1 (Phase 1)</b>
<b>Project</b>	<b>Replace HVAC Unit 3</b>
<b>In Service Date</b>	<b>6/13/2013</b>
<b>Unit Cost</b>	<b>\$5,800</b>
<b>Model Old</b>	<b>567CJ024</b>
<b>Model New</b>	<b>24ABB324A003</b>

UNIT #	3															
	size (tonnage)		Watts/ton		Hrs/day		# of Days		Watt Hours		factor		KWH		SEER of Unit	
old unit	2	X	12,000	X	12	X	180	=	#####	÷	1000	=	51,840	÷	11	= 4,713
new unit	2	X	12,000	X	12	X	180	=	#####	÷	1000	=	51,840	÷	13	= 3,988
													Annual KWH savings			725

UNIT #	3									
	size (tonnage)		Watts/ton	SEER of Unit	Watts		factor		KW	
old unit	2	X	12,000	÷ 11 =	2182	÷	1000	=	2.18	
new unit	2	X	12,000	÷ 13 =	1846	÷	1000	=	1.85	
					Annual KW savings					0.34



<b>Project Number</b>	<b>1 (Phase 2)</b>
<b>Project</b>	<b>Replace HVAC Unit #21</b>
<b>In Service Date</b>	<b>7/21/2012</b>
<b>Unit Cost</b>	<b>\$13,750.00</b>
<b>Model Old</b>	<b>YCDO9OB4L</b>
<b>Model New</b>	<b>48TCEAO8A2A6OAOAO</b>

UNIT #	21 size (tonnage)	Watts/ton	Hrs/day	# of Days	Watt Hours	factor	KWH	EER of Unit	KWH
old unit	7.5	X 12,000	X 12	X 180	= ##### ÷	1000	= 194,400 ÷	11	= 17,673
new unit	7.5	X 12,000	X 12	X 180	= ##### ÷	1000	= 194,400 ÷	13	= 14,954
								Annual KWH savings	2,719

UNIT #	21									
	size (tonnage)		Watts/ton	EER of Unit		Watts		factor		KW
old unit	7.5	X	12,000	÷	11	=	8182	÷	1000	= 8.18
new unit	7.5	X	12,000	÷	13	=	6923	÷	1000	= 6.92
							Annual KW savings		1.26	

**Premix**

**Project Number** 1 (Phase 3)  
**Project** Replace HVAC Unit #2  
**In Service Date** 8/10/2010  
**Unit Cost** \$21,510  
**Model Old** YBD12OB3H  
**Model New** 48TCED12A2G5AOBOCO

**ANNUAL KWH SAVINGS**

UNIT #	<u>2</u>														
	size (tonnage)		Watts/ton		Hrs/day		# of Days		Watt Hours		factor		KWH	EER of Unit	KWH
old unit	10	X	12,000	X	12	X	180	=	259,200,000	÷	1000	=	259,200	÷ 8	= 32,400
new unit	10	X	12,000	X	12	X	180	=	259,200,000	÷	1000	=	259,200	÷ 10	= 25,920

Annual KWH savings	<b>6,480</b>
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**ANNUAL KW SAVINGS**

UNIT #	<u>2</u>										
	size (tonnage)		Watts/ton		EER of Unit	Watts		factor		KW	
old unit	10	X	12,000	÷	11	= 10909	÷		1000	=	10.91
new unit	10	X	12,000	÷	13	= 9231	÷		1000	=	9.23

Annual KW savings	<b>1.68</b>
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## ANNUAL KWH SAVINGS

UNIT #	<u>38</u>																	
	size (tonnage)		Watts/ton		Hrs/day		# of Days		Watt Hours		factor		KWH		EER of Unit		KWH	
old unit	3	X	12,000	X	12	X	180	=	77,760,000	÷	1000	=	77,760	÷	8	=	9,720	
new unit	3	X	12,000	X	12	X	180	=	77,760,000	÷	1000	=	77,760	÷	10	=	7,776	

Annual KWH savings **1,944**

## ANNUAL KW SAVINGS

UNIT #	<u>38</u>																	
	size (tonnage)		Watts/ton		EER of Unit		Watts		factor		KW							
old unit	3	X	12,000	÷	11	=	3273	÷		1000	=	3.27						
new unit	3	X	12,000	÷	13	=	2769	÷		1000	=	2.77						

Annual KW savings **0.50**

	KW Old	KW New	Reduced KW	KWh Old	KWh New	Reduced KWh
Unit 2	10.91	9.23	1.68	32,400	25,920	6480.00
Unit 38	3.27	2.77	0.50	9,720	7,776	1944.00
Total	14.18	12.00	2.18	42,120	33,696	8424.00

**Premix****Project Number 2****Project Air Compressor System and Controls Upgrade****In Service Date 10/31/2012****Project cost \$158,219.00****Calculations conducted by Casco Air Products.**

Average CFM	503	<b>Old KW</b>	<b>Hours</b>	<b>Old KWh</b>	
Specific Power 33KW per 100 CFM ÷	100	166	8,760	1,452,627.00	
Average CFM / 100	5.03				
		<b>New KW</b>		<b>New KWh</b>	
Average CFM / 100	5.03	101	8,760	884,760.00	
Specific Power 33KW per 100 CFM x	33				
Old KW	166				
		<b>Old KW</b>	166	<b>Old KWh</b>	1,452,627.00
Old KW	166	<b>New KW</b>	101	<b>New KWh</b>	884,760.00
Reduced KW x 39%		<b>Reduced KW</b>	<b>65</b>	<b>Reduced KWh</b>	<b>567,867.00</b>
Reduced KW	64.67				
Old KW	166				
Reduced KW (-)	65				
New KW	101				

See Attached

Calculations from CASCO Existing Compressed Air System pages marked 5 and 6.

**Quoted to:**

Premix, Inc.  
P.O. Box 281, Rt. 20 & Harmon Rd  
North Kingsville, OH 44068

phone: 440-224-2181

email:

Date: 10/26/2011

**Quoted by:**

CASCO USA

2022 Filmore Ave

Erie, PA 16506

phone: 814-835-2420

email: [edvor.pagel@cascousa.com](mailto:edvor.pagel@cascousa.com)

Proposal Number: C-EV-102611

The proposed air compressor is a complete package. Installation can be completed within a very short time at minimal cost. No special floor foundations are required. KAESER air compressors are ready to operate as all switches, starters, safety devices, etc. are pre-wired and mounted in the control panel or cabinet. Simply connect the power supply and pipe to the airline, and then push a button.

KAESER supports its compressors with a comprehensive warranty policy which covers the original SIGMA airend, electric drive motor, magnetic motor contactors, and Sigma Control for a period of two years against defects in materials or workmanship. The balance of the components is warranted for one year. KAESER also guarantees 24-hour shipment of any part on our compressors. Our parts shipment guarantee and around-the-clock service department ensures quick response to get your equipment running again. Please ask about KAESER's extended warranty option.

We invite you to continue as a successful business partner in KAESER technology.

**SFC 110S**

**This quotation includes the following:**

- ☒ Scope of supply page
- ☒ Terms and delivery page
- ☒ Detailed pricing page
- Total: \$148,550.00**
- ☒ Technical specifications and/or dimensional drawing

<b>Model:</b> SFC 110S	
<b>Discharge Pressure:</b>	125 psig
<b>Drive Motor:</b>	125 hp
<b>Drive Motor Efficiency:</b>	95.0 %
<b>Noise Level:</b>	76 dB(A)
<b>Minimum Pressure:</b>	90 psig
<b>Maximum Pressure:</b>	125 psig
<b>Electrical Requirement:</b>	460V/3ph/60Hz
<b>Cooling Method:</b>	Air-cooled

**COMPRESSOR PERFORMANCE DATA**

Maximum	Capacity [cfm]	Minimum
613		138
123.4	Input Power [kW]*	30.7

\* input power shown is for air-cooled, 460V model

**SCOPE OF SUPPLY**

SFC 110S Rotary screw compressor is designed for the performance specified herein. The Kaeser rotary screw compressor includes the following standard features and accessories:

**Compressor**

- Single-stage, fluid-injected rotary screw compressor with the power-saving Sigma Profile airend

**Electric Motor/Drive**

- Direct 1:1 ratio drive with low-maintenance, heavy duty, flexible coupling
- Premium efficiency TEFC drive motor with thermal overload protection, minimum 1.15 service factor, 150% minimum pull-up torque and Class F insulation. It features external grease fittings

**Protective Devices**

- Built-in protective devices include safety pressure relief valve(s), emergency stop button, fluid level sight glasses and compressor shutdown for electrical overload or high temperature on AC variable frequency drive

**Air/Coolant System**

- Two-stage 1-micron air intake filter with cleanable and replaceable element

**Enclosure**

- Soundproofed enclosure features lined panels and a durable powder-coated finish. Compressor is mounted on solid base frame with a solid steel floor and anti-vibration mounts. Additional vibration isolation of airend, motor and separator tank is standard. Panels are removable for easy maintenance access

**Sigma Control**

- Sigma Control™: PC-based control system with Intel® processor and real-time operating system monitors all critical compressor functions. Remote start/stop, programmable timers and two-unit sequencing are standard features

**Variable Speed Drive**

- Siemens AC variable frequency Masterdrive using Pulse Width Modulation technology and a "soft start" system for unlimited motor starts, all integrally mounted and wired in the compressor package
- Variable frequency drive control efficiently adjusts compressed air output during fluctuating demand to maintain system pressure within  $\pm 2$  psig by reducing or increasing airend speed. An idle period timer shuts the compressor down if air is not required for a preset time
- Variable frequency drive allows for an effective flow range of about 20 to 100%. EMI filters, a contactor for galvanic separation, and a line reactor provide safety and reliability

**Refrigerated Dryer (On T Models)**

- Built-in refrigerated air dryer provides pressure dew point as low as 38°F with minimum pressure drop
- Air-to-air and air-to-refrigerant heat exchangers are constructed of stainless steel plates that provide a low pressure drop. Dryer uses CFC-free R-134a refrigerant
- A multistage, stainless steel separator filters out large amounts of water and contaminants in the air stream

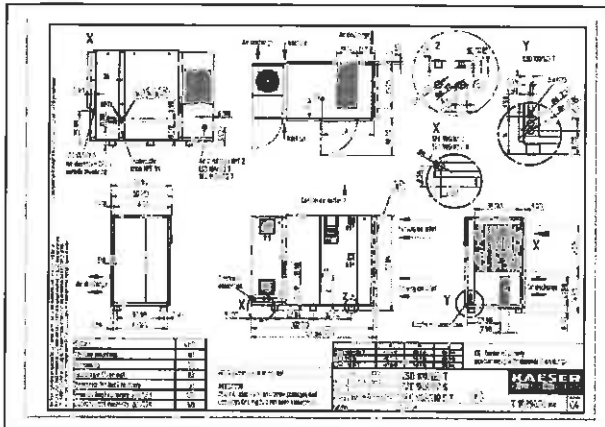
**Warranty**

- Twenty-four (24) hour emergency parts guarantee (Variable Frequency Drive components not included)
- Standard twelve (12) month warranty on compressor package for materials and workmanship
- Standard twenty-four (24) month limited warranty on airend, motor, and Sigma Control™
- Optional sixty (60) month limited warranty on airend, motor and Sigma Control™

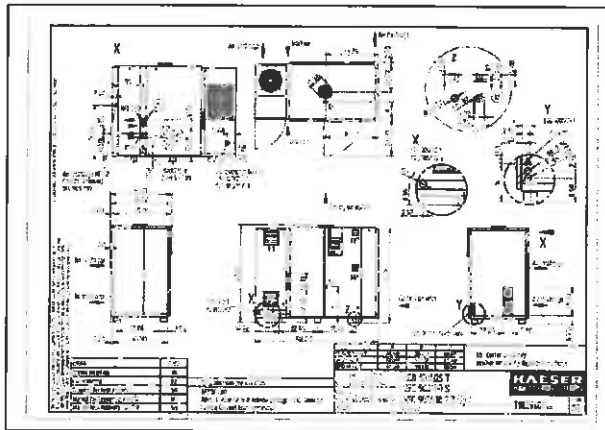
All specifications subject to change without notice.






**SFC 90S (T) - 110S (T) A/C**
**WEIGHT (LBS):**

SFC 90S	4,850
SFC 90ST	5,300
SFC 110S	5,300
SFC 110ST	5,730


**SFC 90S (T) - 110S (T) W/C**
**SIGMA CONTROL™ STANDARD FEATURES**
**Status data (statistics, messages, printout)**

- Duty cycle in %  
(for determinable periods)
- Min./max. air main pressure
- Motor starts per defined time interval
- Last run on load
- Last run in idle
- Last motor off
- Last alarm
- Last service
- Activated alarms
- Activated service routines
- Activated messages

**Hour counter for:**

- Total hours
- Load hours
- Total duty cycle
- Number of motor starts
- Motor runtime
- Airend runtime
- Sigma Control runtime

**Data display of:**

- Air system pressure
- Pressure build-up
- Cut-out pressure
- Airend discharge temperature
- Airend discharge temperature before start
- Airend discharge temperature rise

**Service hour counter for:**

- Fluid filter
- Fluid separator
- Fluid change
- Air filter
- Motor bearings
- Electrical components

**Standard serial interfaces:**

- RS 232 (for modem, printer)
- RS 485 (for sequencer)
- Profibus

**DETAILED PRICING:**Sales tax % (If applicable): 0.00%

QTY	COMPRESSOR & ACCESSORIES:	PRICE (EA)	*	PRICE	TAX	EXT PRICE
1	SFC 110S	\$ 56,970.00		\$ 56,970.00	\$ -	\$ 56,970.00
				\$ -	\$ -	\$ -
2	KAESER CSD100S, 100-hp compressor rated for 417 CFM @ 125 PSI	\$ 27,950.00		\$ 55,900.00	\$ -	\$ 55,900.00
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
1	KAESER Refrigerated air dryer model TH371E rated for 1300 CFM	\$ 12,210.00		\$ 12,210.00	\$ -	\$ 12,210.00
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
1	KAESER Coalescing filter model KOR1250P	\$ 1,640.00		\$ 1,640.00	\$ -	\$ 1,640.00
				\$ -	\$ -	\$ -
1	KAESER Sigma Air Manager SAM 4x4 with Sigma Air Plus	\$ 9,890.00		\$ 9,890.00	\$ -	\$ 9,890.00
				\$ -	\$ -	\$ -
1	Vertical ASME Coded air receiver with a rated capacity of 1500-gallons. The air receiver come with a safety relief valve, pressure gauge & KAESER auto drain.	\$ 7,410.00		\$ 7,410.00	\$ -	\$ 7,410.00
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
1	Vertical ASME Coded air receiver with a rated capacity of 660-gallons. The air receiver comes with a safety relief valve, pressure gauge & KAESER auto Drain	\$ 4,530.00		\$ 4,530.00	\$ -	\$ 4,530.00
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
				\$ -	\$ -	\$ -
<b>TOTAL</b>				<b>\$</b>		<b>148,550.00</b>

\* Non-taxable item

**Additional comments:**


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**DELIVERY TERMS AND CONDITIONS:**Estimated Delivery: 7-10 Days as of 11/18/11 after receipt of order.Payment Terms: 1/3 down, Net 30 days  
upon delivery.Shipping Terms: F.O.B. - Shipping Point / No freight discount on prepay and add shipmentsValidity Period: 60 Days from date of this proposal.

**Quoted to:**

Premix, Inc.

P.O.Box 281 Rt. 20 & Harmon Road

North Kingsville, OH 44068

**phone:** 44-224-2181

**email:** \_\_\_\_\_

**Date:** 11/18/2011

**Quoted by:**

CASCO USA

2022 Filmore Ave

Erie, PA 16506

**phone:** 814-835-2420

**email:** edvorpapel@cascousa.com

**Proposal Number:** C-EV-111811

Gentlement,

The following is the proposal for the installation of the proposed KAESER equipment for your facility. The equipment will be installed in the KAESER Smartpipe system. The proposal includes the compressed air piping for both locations.

The electrical wiring for the equipment will be the responsibility of Premix, Inc.

**SmartPipe™**

**This quotation includes the following:**

- ☒ Scope of supply page
- ☒ Terms and delivery page
- ☒ Detailed pricing page
- Total:** \$7,650.00
- ☒ Technical specifications and/or dimensional drawing



## SmartPipe™



### **SCOPE OF SUPPLY**

#### **Wide Scope of Supply**

- SmartPipe™ is available in six sizes from 100 mm down to 16.5 mm and is perfect for use as headers, branch lines, and drops to point of use. It is available in 10 ft lengths for 16.5 mm and 20 ft lengths for all other sizes.
  - 100 mm OD (4" ID)
  - 76 mm OD (3" ID)
  - 63 mm OD (2-1/2" ID)
  - 40 mm OD (1-1/2" ID)
  - 25 mm OD (7/8" ID)
  - 16.5 mm OD (1/2" ID)
- SmartPipe™ includes all the accessories you need for a top quality installation:
  - straight unions
  - elbows and tees
  - cross connectors
  - reducing fittings
  - gooseneck drops
  - ball valves
  - quick assembly brackets and hangers
  - snap-shut pipe clips
  - expansion and flex hoses
  - variety of ISO 4414 / EN 983 compliant safety couplers
- SmartPipe™ provides compressed air and inert gas distribution for pressures up to 188 psig (13 bar) (consult factory for higher pressures) in temperatures from -4°F to + 140°F (-20°C to 60°C). SmartPipe™ is also ideal for vacuum up to 98.7% (29.6" Hg).

#### **Optimum flow and air quality**

- SmartPipe's smooth calibrated aluminum construction has a low friction coefficient, providing the best possible laminar flow. Full bore fittings further minimize pressure drop for optimum flow and energy efficiency. Leak free connectors prevent air loss and wasted energy.
- SmartPipe™ is ideal for installations requiring the highest quality air. Aluminum material will not rust or corrode. Further, it has no rough surfaces or interior restrictions that accumulate contaminants. The smooth interior with full bore design allows them to flow to your dryers and filters for efficient removal.

#### **Other features include:**

- Installs faster than other common piping
- No specialized trades needed
- No threading, welding, or brazing pipe
- No special tools are needed
- Simple to use mounting and connecting hardware
- Can connect to existing systems with other pipe types
- Easy to add or disassemble for your changing needs.

#### **Standards of conformance**

- Complies with ASME B31.1 and B31.3
- Complies with ISO/FDIS 4414 norm
- Pipe is rigid and manufactured in aluminum alloy 6063-T5 as defined in ASTM B241
- Extruded pipe conforms to EN755.2, EN755.8, and EN573.3 standards
- Complies with applicable UL standards
- Complies with applicable CSA standards
- Complies with applicable TUV standards

#### **Warranty**

- Kaeser Compressors, Inc. warrants its products to be free of defects in material and workmanship for a period of two (2) years from the date of purchase of the products.

All specifications subject to change without notice.





## The Existing Compressed Air System

The existing system is comprised of the following:

### Station 1:

- Two (2) Sullair 100HP Rotary Screw Compressors
  - (1) VCC200-100L, (1) LS20-100L
  - 490 CFM each
  - 100 PSIG Full Load Pressure
  - 100 Rated Horsepower
  - Rotor Length and Inlet Modulation Controls
- One (1) Airtex CT500 Refrigerated Dryer
  - Integrated Filter
  - Timed Electric Drain
  - 500 CFM Capacity at 100 PSIG
- One (1) Pioneer R500A Refrigerated Dryer
  - Pre- and After- Filters
  - Timed Electric Drain
  - 500 CFM Capacity at 100 PSIG
  - Not in Operation
- One (1) Arrow 3512 Refrigerated Dryer
  - Timed Electric Drain
  - 340 CFM Capacity at 100 PSIG
- One (1) 1,060 Gallon Receiver

*near end  
of useful life*

### Station 2:

- One (1) Worthington Rollair 100 Rotary Compressor
  - 450 CFM at 100 PSIG
  - 100 Rated Horsepower
  - Inlet Modulation Control
- One (1) Airtex CT500 Refrigerated Dryer
  - Integrated Filter
  - Timed Electric Drain
  - 500 CFM Capacity at 100 PSIG

*near end  
of useful life*

**Station 3:**

- One (1) Sullair 12BS-50LACAC Rotary Compressor
  - 235 CFM
  - 100 PSIG Full Load Pressure
  - 50 Rated Horsepower
  - Inlet Modulation Control
- One (1) MTA DE Series Refrigerated Dryer
  - 250 CFM Capacity at 100 PSIG

**Plant:**

- Two (2) Receivers totaling approximately 1,600 Gallons

### Testing Methodology

12/4/10 - 12/10/10

The main compressor room was tested using a Sierra 640S series thermal mass flow meter at the compressor header prior to the auxiliary aftercooler. Additionally, input kilowatts to each compressor were measured using Veris H8044 series power meters and pressures at the inlet and outlet of the air treatment bank were measured using ProSense pressure transmitters. Data was recorded at a 1-second sample rate.

The other two compressor stations were each measured using Veris H8044 series power meters and ProSense pressure transmitters, and air delivery was calculated based upon power and pressure readings. Data was recorded using Onset Energy Logger Pro data loggers at a 4 second sample rate.

All high sample rate data was reviewed for short duration events and anomalies and then averaged over 5-minute periods for ease of viewing.

### Initial Findings

**Air Demand**

<b>Minimum (CFM):</b>	300.4
<b>Average (CFM):</b>	502.5
<b>Peak (CFM):</b>	969.5

Air demand typically fluctuated between 400 and 500 CFM on off shifts and weekends, with peaks to up to 800 or more during peak operation.

### Air Pressure

Minimum (PSIG):	84.6
Average (PSIG):	96.4
Peak (PSIG):	98.6

*unable to meet 100 psi requirement  
w/ these units  
Sullivan advised we could run @ 120 psi*

Main plant pressure was found to vary inversely with demand, as expected, due to the controls of the compressors and increasing pressure drop through piping and air treatment equipment as demand increased. One notable low pressure point occurred the morning of 12/15 when the main compressors were each shut down for a time for a filter change. Also, an increase in demand on the afternoon of 12/21 caused pressure to fall until the Worthington compressor was brought online.

### Estimated Power Consumption

Minimum (kW):	94.3
Average (kW):	165.9
Peak (kW):	252.8
Specific Power: (kW/100 CFM)	33.0

**Estimated Annual Energy Cost: \$ 145,329.66**

(Based upon 24 Hrs, 7 Days/Wk, and \$ 0.10 per kWh)

The specific power consumption of the system was measured to be 33.0 kW per 100 CFM of demand, on average. A system of this size should be able to achieve power consumption of 20 kW per 100 CFM or better, indicating an opportunity for savings of up to 39%.

### Physical Inspection

The equipment appeared to be in good operating order, and operating within normal limits. The main compressor room was located on a mezzanine area, which was adequately temperature controlled at the time of the survey, but may require further ventilation in the warmer seasons.

The other two compressor stations were noted to be on the plant floor, with the 50HP machine in particular being in close proximity of the work force. This could provide some environmental concerns, as this machine is fairly loud (approximately 85 dB(A)).

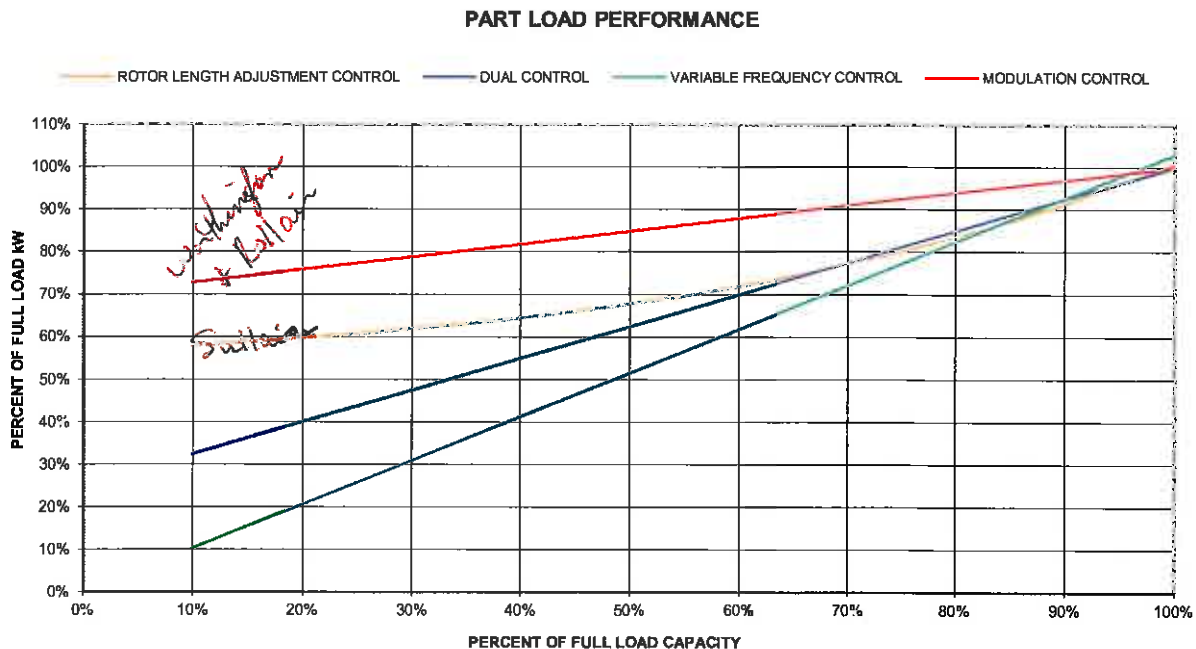
Both the Worthington compressor and the Arrow Pneumatics air dryer were noted to



be quite old and near the end of their useful lives.

## Compressor Selection

Many companies are content to determine the maximum air requirement for their facility, and size a single air compressor to meet that demand. What they often don't realize is that this type of compressed air system is only operating efficiently when it is operating near its capacity. As shown in the following chart, most compressors, no matter what control system they use, require a greater percentage of their full load input power than the percentage of load at which they are operating.



### Part Load Performance Curves

These inefficiencies stem from a variety of causes such as reduced motor efficiency at part load, and other factors specific to the compressor control type. Because of these part load inefficiencies, a multiple compressor installation is often the most cost-effective solution to meeting highly fluctuating air demands.

For instance, an air demand, which varies between requirements of 50 to 100 horsepower, would operate more efficiently using two 50 horsepower compressors than using one 100 horsepower compressor, because one compressor could run fully loaded all the time while the other compressor operates at part load. Depending on circumstances, a system of one 50 horsepower and two 25 horsepower compressors may be more efficient yet.

As detailed in the above graph, part load efficiency also varies significantly with the type of control system used. Following are brief descriptions of four systems detailed on the chart.

### **Modulation Control**

The least efficient control type shown on the chart is inlet valve modulation, usually referred to as simply modulation control. A modulation controlled compressor controls capacity by restricting the amount of air flowing into the inlet of the compressor, which creates a vacuum condition at the compressor inlet, increasing the compression ratio of the compressor.

### **Rotor Length Adjustment**

The second type of control system we will discuss is called rotor length adjustment, and is used only in rotary screw compressors. Some manufacturers' names for this type of control are: turn valve, spiral valve, and poppet valve control. Capacity is controlled by a valving system, which diverts air from the compression process back to the inlet and recycles it. Typically, the rotor length adjustment can only control the compressor down to 40 to 50% capacity. Below this, the inlet valve typically modulates, as described above, for little power savings.

The dual nature of this control system, along with the non-linear efficiency curve, makes these machines difficult to operate efficiently in a multiple compressor installation.

### **Load/No-Load and Dual Control**

In these control systems, the inlet valve operates in either the fully open or fully closed position, meaning that the compressor either produces its maximum capacity or no air at all. To do this, it pumps the system pressure up to approximately 10 PSI above the minimum allowable pressure. It then unloads, allowing the system to run off the air stored in receiver tanks and system piping. When the pressure drops near the minimum allowable pressure, the inlet valve opens again, and the compressor pumps up the system once again.

Dual control differs from load / no load control by shutting the drive motor off completely when the compressor hasn't been required to load for a long period

(several minutes). This provides added efficiency during periods of very low air use, or when not all compressors in a multiple compressor system are required.

The full load / no load operation of these compressors is very useful in creating an efficiently controlled multiple compressor system.

### **Variable Frequency Control**

A relatively new addition to rotary screw compressor controls is variable speed control. This control method is the most efficient method available for highly fluctuating loads. It operates by changing the motor and airend operating speed to adjust for variations in system demand. Some types use special switch-reluctance DC motors, while others convert incoming AC power to DC, and then convert it back to AC at a controlled frequency. The second type uses standard AC motors. The speed variation of these compressors is typically from 100% down to 25% of full load speed and capacity. Part load performance in this range is the best of any control system discussed.

The down sides to variable frequency drive compressors are high initial cost and increased *full load* power consumption compared to other compressors of the same capacity. Typically, the airend of the variable speed compressor must be specially designed for operation and efficiency over a wide speed range. For this reason, addition of a VFD to a standard compressor rarely provides the desired savings.

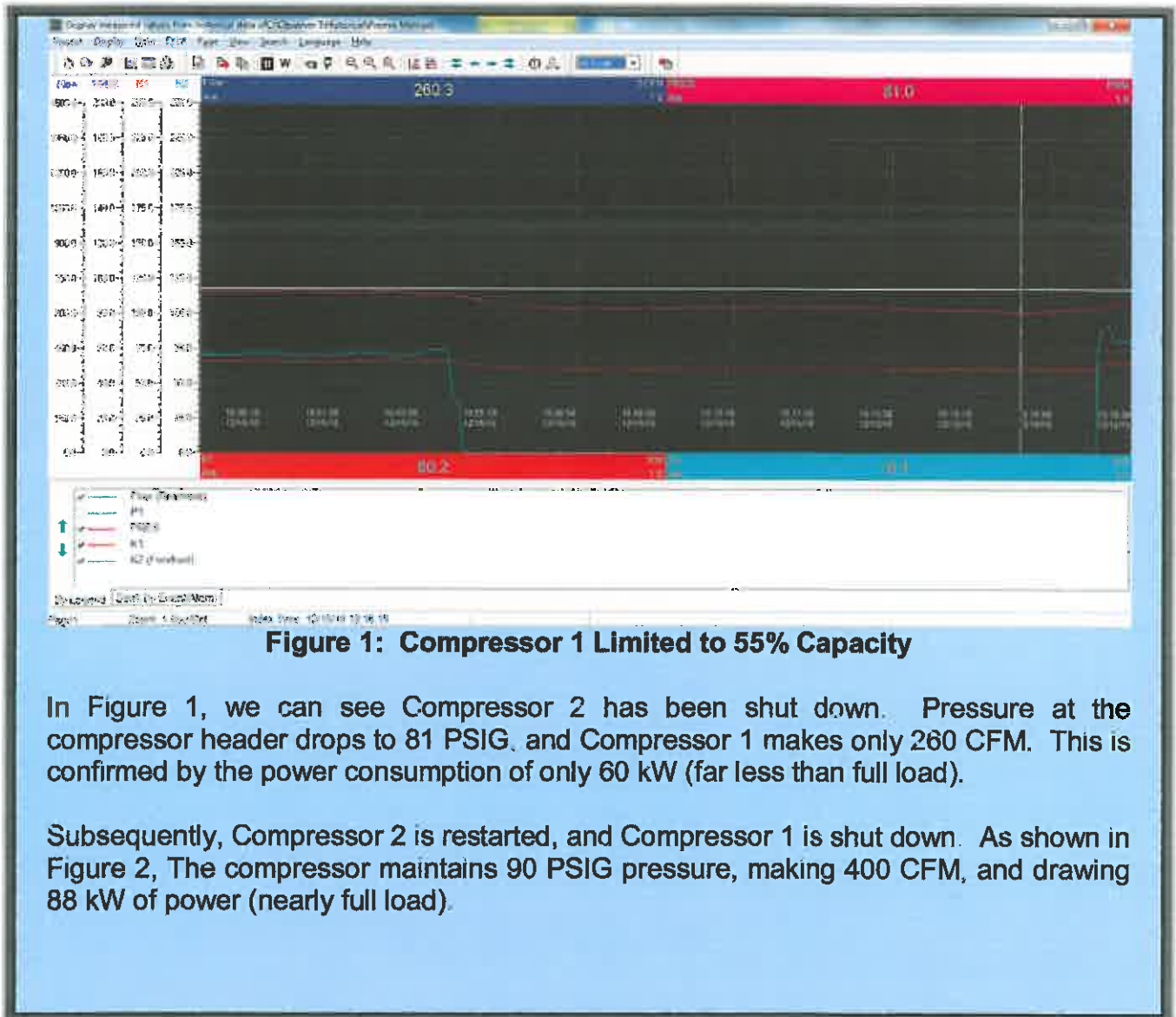
Because of the increased full load power consumption, it is recommended to have only one variable frequency compressor in a system, and to ensure that this unit always handles the varying peak load of the system.

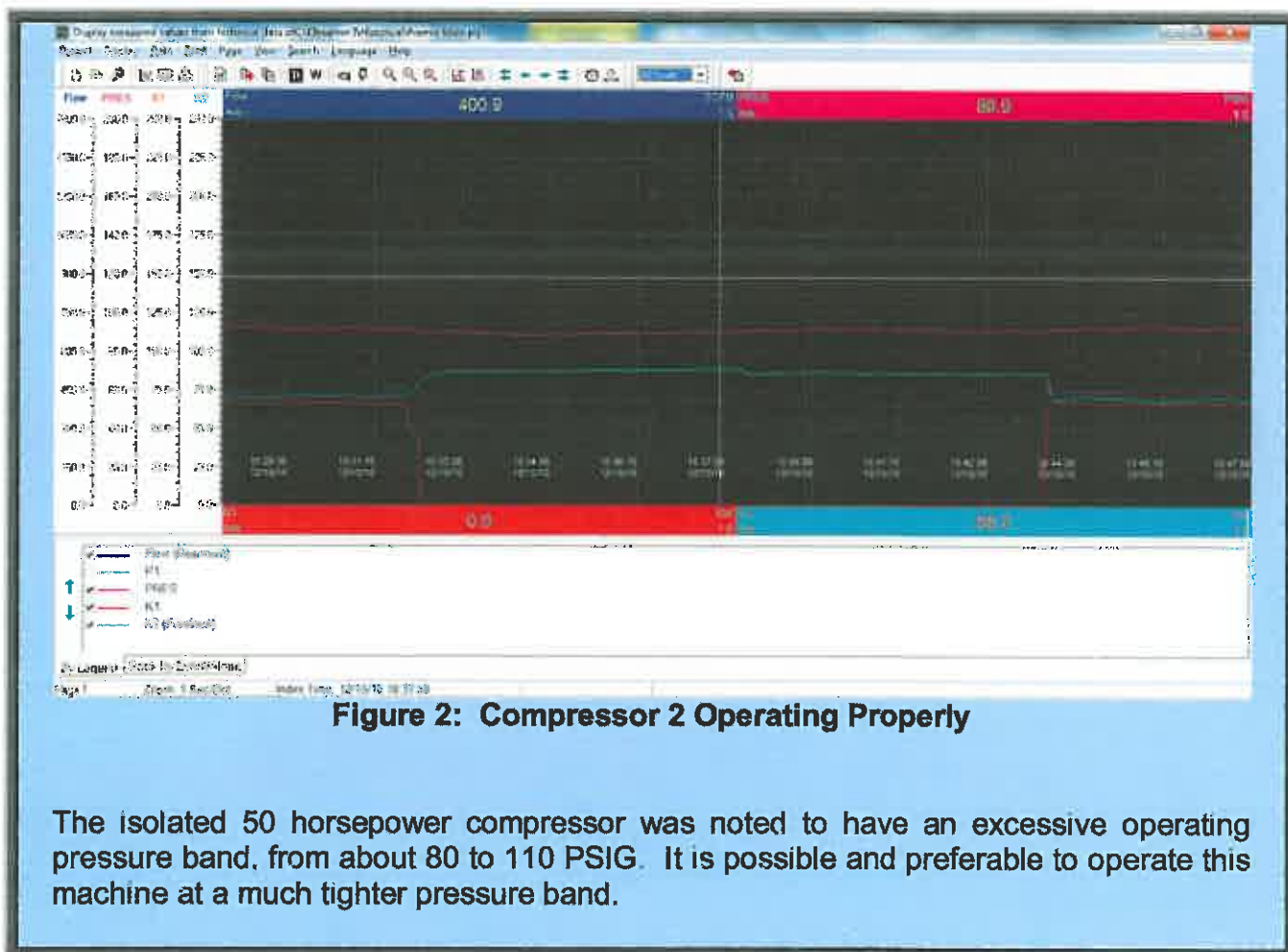
### **Suitability of Existing Compressors**

The existing compressors are more than capable of meeting existing demands, but backup capability is questionable. All installed compressors utilize Inlet modulation controls. As noted previously, this control method provides poor part load efficiency, requiring approximately 70% of full load power at no demand whatsoever.

The two 100HP Sullair compressors additionally have rotor length adjustment controls. Review of data on 12/15, when these compressors were each shut down for a time, indicates that Compressor 1 was not performing at full capacity, and was limited to approximately 55% of full capacity. This is likely the result of a stuck or maladjusted spiral valve control on this machine.







## Clean Air Treatment

Dirt, water vapor and other impurities enter the compressor with the atmospheric air. During the compression process, oil (liquid and vapor) is also commonly introduced. If not removed, dirt, liquid water and oil travel downstream causing product rejects, costly production delays, and increased maintenance costs. Problems such as corrosion, scaling, pressure loss, contamination, and freezing are serious and create down time for compressed air systems. They lead to production problems such as contamination of equipment, accelerated tool wear, and product rejects.

Though this may lead to the opinion that cleaner, drier air is better, each additional filter or dryer comes with a power cost and / or pressure drop. For this reason, it is recommended that only as much air treatment as necessary is used. Some of the more common treatment devices are discussed below.

**Mercantile Customer Project Commitment Agreement**  
**Exemption Option**

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between The Cleveland Electric Illuminating Company, its successors and assigns (hereinafter called the "Company") and Premix Inc., its permitted successors and assigns (hereinafter called the "Customer") (collectively the "Parties" or individually the "Party") and is effective on the date last executed by the Parties as indicated below.

**WITNESSETH**

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

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

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

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

WHEREAS, Customer has certain customer-sited demand reduction, demand response, or energy efficiency project(s) as set forth in attached Exhibit 1 (the "Customer Energy Project(s)") that it desires to commit to the Company for integration into the Company's Energy Efficiency & Peak Demand Reduction Program Portfolio Plan ("Company Plan") that the Company will implement in order to comply with the Statute; and

WHEREAS, the Customer, pursuant to and consistent with the Statute, desires to pursue exemption from paying charges included in the Company's then current cost recovery mechanism (hereinafter, "Rider DSE") as approved by the Public Utilities Commission of Ohio ("Commission") for recovery of the DSE2 costs associated with the Company Plan; and is committing the Customer Energy Project(s) as a result of such exemption.

WHEREAS, Customer's decision to commit its Customer Energy Project(s) to the Company for inclusion in the Company Plan has been reasonably encouraged by the possibility of an exemption; and

WHEREAS, in consideration of, and upon receipt of, said exemption, Customer has consented to committing the Customer Energy Project(s) to the Company and complying with all other terms and conditions set forth herein, including without limitation, the submission of an annual report on the energy savings and/or peak-demand reductions achieved by the Customer Energy Project(s).

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

1. **Customer Energy Projects.** Customer hereby commits to the Company and Company accepts for integration into the Company Plan the Customer Energy Project(s) set forth on attached Exhibit 1. Said commitment shall be for the life of the Customer Energy Project(s). Company will incorporate said project(s) into the Company Plan to the extent that such projects qualify. In so committing, and as evidenced by the affidavit attached hereto as Exhibit A, Customer

acknowledges that the information provided to the Company about the Customer Energy Project(s) is true and accurate to the best of its knowledge.

- a. By committing the Customer Energy Project(s) to the Company, Customer acknowledges and agrees that the Company shall control the use of the kWh and/or kW reductions resulting from said projects for purposes of complying with the Statute. By committing the Customer Energy Project(s), Customer further acknowledges and agrees that the Company shall take ownership of the energy efficiency capacity rights associated with said Project(s) and shall, at its sole discretion, aggregate said capacity into the PJM market through an auction. Any proceeds from any such bids accepted by PJM will be used to offset the costs charged to the Customer and other of the Company's customers for compliance with state mandated energy efficiency and/or peak demand requirements.
  - b. The Company acknowledges that some of Customer's Energy Projects contemplated in this paragraph may have been performed under certain other federal and/or state programs in which certain parameters are required to be maintained in order to retain preferential financing or other government benefits (individually and collectively as applicable, "Benefits"). In the event that the use of any such project by the Company in any way affects such Benefits, and upon written request from the Customer, Company will release said Customer's Energy Project(s) to the extent necessary for Customer to meet the prerequisites for such Benefits. Customer acknowledges that such release (i) may affect Customer's exemption benefits discussed in Article 3 below; and (ii) will not affect any of Customer's other requirements or obligations, including without limitation any reporting requirements, as set forth herein.
  - c. Any future Customer Energy Project(s) committed by Customer shall be subject to a separate application and, upon approval by the Commission, said projects shall become part of this Agreement.
  - d. Customer will provide Company or Company's agent(s) with reasonable assistance in the preparation of a joint application for approval of this Agreement ("Joint Application") that will be filed with the Commission, with such Joint Application being consistent with then current Commission requirements.
  - e. Upon written request and reasonable advance notice, Customer will grant employees or authorized agents of either the Company or the Commission reasonable, pre-arranged access to the Customer Energy Project(s) for purposes of measuring and verifying energy savings and/or peak demand reductions resulting from the Customer Energy Project(s). It is expressly agreed that consultants of either the Company or the Commission are their respective authorized agents.
2. **Joint Application to the Commission.** The Parties will submit the Joint Application using the Commission's standard "Application to Commit Energy Efficiency/Peak Demand Reduction Programs" in which they will seek the Commission's approval of (i) this Agreement; (ii) the commitment of the Customer Energy Project(s) for inclusion in the Company Plan; and (iii) the Customer's exemption from paying the DSE2 charge of the Company's Rider DSE.

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

- i. A narrative description of the Customer Energy Project(s), including but not limited to, make, model and year of any installed and/or replaced equipment;
- ii. A copy of this Agreement; and

- iii. A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results.

**3. Customer Exemption and Annual Report.** Upon Commission approval of the request for exemption, the Company will exempt Customer from paying any Rider DSE charges consistent with any Commission directives as set forth in the Commission's Finding and Order approving the Joint Application. Such exempt status shall apply to those accounts identified by Customer that pertain to those Customer sites with one or more Customer Energy Project(s) approved for integration into the Company Plan by the Commission in the Joint Application.

- a. For purposes of this Agreement, a "site" shall be a single location with one or more facilities. As examples only, a site includes an industrial plant, a hospital complex or a university located on one or more parcels of land, provided that said parcels are contiguous.
- b. For purposes of this Agreement, an "account" shall be as defined by the Company through its normal business practices. Any account identified by Customer shall be eligible for exemption, provided that said account pertains to a specific site with at least one Customer Energy Project that qualifies Customer for exemption from paying Rider DSE charges.
- c. Any new accounts created at a site on which there is already an approved Customer Energy Project shall, at the option of the Customer, be included within the exemption granted under said project, and shall be included for purposes of calculating future eligibility for exemption under the project. Any such election shall become effective in the first billing cycle after March 15<sup>th</sup> following identification of said account in the annual report required under Section 3(d)(iii) below.
- d. Customer acknowledges and agrees that if it desires to pursue such exempt status, as evidenced in the Joint Application, Customer is obligated to provide to the Company an annual report on the energy savings and peak-demand reductions achieved by the Customer Energy Project(s) on a calendar year basis. Company shall provide Customer with such information as it may require, that is in Company's possession, for the purposes of preparing such report. Company shall provide a template for Customer to use in preparing the annual report and shall make available a designated Company representative to answer questions.
  - i. Said report shall be submitted annually on or before January 31 of each year after Commission approval of the Joint Application.
  - ii. Said report shall provide all information required under the Rules, and where the requirements of the Rules conflict with a requirement under this Agreement or the Joint Application, the requirements of the Rules shall control.
  - iii. Said report shall, at a minimum, include the following information for each Customer Energy Project that has been approved by the Commission:
    - 1. A demonstration that the energy savings and peak-demand reductions associated with the Customer Energy Project(s) meet the total resource cost test or that the Company's avoided cost exceeds the cost to the Company for the Customer's program;
    - 2. A statement distinguishing programs implemented before and after January 1 of the current year;

3. A quantification of the energy savings or peak-demand reductions for programs initiated prior to 2009 in the baseline period;
4. A recognition that the Company's baselines have been increased by the amount of mercantile customer energy savings and demand reductions;
5. A listing and description of the Customer Energy Projects that have been implemented, which provides the detail required by the Rules;
6. An accounting of expenditures made by the mercantile customer for each program and its component energy savings and peak-demand reduction attributes; and
7. A timeline showing when each Customer Energy Project went into effect and when the energy savings and peak-demand reductions occurred.
8. Any other information reasonably necessary for the Company to (i) verify Customer's continued eligibility for exemption from paying Rider charges; and (ii) report in the Company's annual status report to the Commission the EE&PDR results related to each Customer Energy Project.

e. Customer's exemption shall automatically terminate:

- i. At the end of the exemption period as determined by the Commission
- ii. Upon order of the Commission or pursuant to any Commission rule;
- iii. If Customer fails to comply with the terms and conditions set forth in the Company's then current Rider DSE, or its equivalent, as amended from time to time by the Commission, within a reasonable period of time after receipt of written notice of such non-compliance;
- iv. If it is discovered that Customer knowingly falsified any documents provided to the Company or the Commission in connection with this Agreement or the Joint Application. In such an instance, Company reserves the right to recover any exempted rider charges from the date of approval of the Joint Application through the date said exemption is terminated; or
- v. If Customer fails to submit the annual report required in (d) above. In such an instance, Company reserves the right to recover any exempted rider charges from the date of approval of the Joint Application through the date said exemption is terminated. It is expressly agreed that this provision shall not apply should said report contain errors, provided that the submission of said report is made in good faith. It is further agreed that the Company will provide written notice of the date on which said report is due at least thirty (30) days prior thereto.

f. Company reserves the right to recover from Customer any Rider DSE charges incurred by Customer after the date Customer's exemption terminates.

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

- a. If the Commission fails to approve this Agreement through the Joint Application;

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

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

Customer acknowledges that if a Customer Project is withdrawn pursuant to Paragraph 1(b) of this Agreement, the exemption or a portion of such exemption may be affected. Should Customer elect to withdraw a project pursuant to Paragraph 1(b), Customer shall provide Company with reasonable assistance in preparing any documentation that may be required by the Commission and, upon reasonable request, shall provide documentation supporting the necessity to withdraw such project.

- 4. **Confidentiality.** Each Party shall hold in confidence and not release or disclose to any person any document or information furnished by the other Party in connection with this Agreement that is designated as confidential and proprietary ("Confidential Information"), unless: (i) compelled to disclose such document or information by judicial, regulatory or administrative process or other provisions of law; (ii) such document or information is generally available to the public; or (iii) such document or information was available to the receiving Party on a non-confidential basis at the time of disclosure.
  - a. Notwithstanding the above, a Party may disclose to its employees, directors, attorneys, consultants and agents all documents and information furnished by the other Party in connection with this Agreement, provided that such employees, directors, attorneys, consultants and agents have been advised of the confidential nature of this information and through such disclosure are deemed to be bound by the terms set forth herein.
  - b. A Party receiving such Confidential Information shall protect it with the same standard of care as its own confidential or proprietary information.
  - c. A Party receiving notice or otherwise concluding that Confidential Information furnished by the other Party in connection with this Agreement is being sought under any provision of law, to the extent it is permitted to do so under any applicable law, shall endeavor to: (i) promptly notify the other Party; and (ii) use reasonable efforts in cooperation with the other Party to seek confidential treatment of such Confidential Information, including without limitation, the filing of such information under a valid protective order.
  - d. By executing this Agreement, Customer hereby acknowledges and agrees that Company may disclose to the Commission or its Staff any and all Customer information, including Confidential Information, related to a Customer Energy Project, provided that Company uses reasonable efforts to seek confidential treatment of the same.
- 5. **Taxes.** Customer shall be responsible for all tax consequences (if any) arising from the application of the exemption.
- 6. **Notices.** Unless otherwise stated herein, all notices, demands or requests required or permitted under this Agreement must be in writing and must be delivered or sent by overnight express mail, courier service, electronic mail or facsimile transmission addressed as follows:

**If to the Company:**

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

**If to the Customer:**

Premix Inc.  
3365 East Center Street  
North Kingsville, Ohio 44068  
Attn: Frank Stawicki  
Telephone: 440-224-7200  
Fax: 440-224-2766  
Email: [frank.stawicki@premix.com](mailto:frank.stawicki@premix.com)

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

7. **Authority to Act.** The Parties represent and warrant that they are represented by counsel in connection with this Agreement, have been fully advised in connection with the execution thereof, have taken all legal and corporate steps necessary to enter into this Agreement, and that the undersigned has the authority to enter into this Agreement, to bind the Parties to all provisions herein and to take the actions required to be performed in fulfillment of the undertakings contained herein.
8. **Non-Waiver.** The delay or failure of either party to assert or enforce in any instance strict performance of any of the terms of this Agreement or to exercise any rights hereunder conferred, shall not be construed as a waiver or relinquishment to any extent of its rights to assert or rely upon such terms or rights at any later time or on any future occasion.
9. **Entire Agreement.** This Agreement, along with related exhibits, and the Company's Rider DSE, or its equivalent, as amended from time to time by the Commission, contains the Parties' entire understanding with respect to the matters addressed herein and there are no verbal or collateral representations, undertakings, or agreements not expressly set forth herein. No change in, addition to, or waiver of the terms of this Agreement shall be binding upon any of the Parties unless the same is set forth in writing and signed by an authorized representative of each of the Parties. In the event of any conflict between Rider DSE or its equivalent and this document, the latter shall prevail.
10. **Assignment.** Customer may not assign any of its rights or obligations under this Agreement without obtaining the prior written consent of the Company, which consent will not be unreasonably withheld. No assignment of this Agreement will relieve the assigning Party of any of its obligations under this Agreement until such obligations have been assumed by the assignee and all necessary consents have been obtained.
11. **Severability.** If any portion of this Agreement is held invalid, the Parties agree that such invalidity shall not affect the validity of the remaining portions of this Agreement, and the Parties further agree to substitute for the invalid portion a valid provision that most closely approximates the economic effect and intent of the invalid provision.



12. **Governing Law.** This Agreement shall be governed by the laws and regulations of the State of Ohio, without regard to its conflict of law provisions.
13. **Execution and Counterparts.** This Agreement may be executed in multiple counterparts, which taken together shall constitute an original without the necessity of all parties signing the same page or the same documents, and may be executed by signatures to electronically or telephonically transmitted counterparts in lieu of original printed or photocopied documents. Signatures transmitted by facsimile shall be considered original signatures.

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

The Cleveland Electric Illuminating Company  
(Company)

By: 

Title: VP of Energy Efficiency

Date: 12-12-12

(Customer)

By: 

Title: Supplier & Supply Chain Mgr

Date: 12-4-12

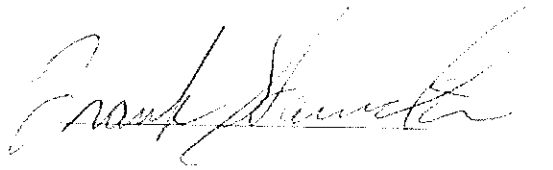
Affidavit of Customer Legal Name Exhibit A

STATE OF OHIO )  
 )  
COUNTY OF ) SS:  
STAWICKI

I, Frank Stawicki, being first duly sworn in accordance with law, deposes and states as follows:

1. I am the Title of Premix Inc. ("Customer") As part of my duties, I oversee energy related matters for the Customer.
2. The Customer has agreed to commit certain energy efficiency projects to The Cleveland Electric Illuminating Company ("Company"), which are the subject of the agreement to which this affidavit is attached ("Project(s)").
3. In exchange for making such a commitment, the Company has agreed to provide Customer with a Rider Exemption ("Incentive"). This Incentive was a critical factor in the Customer's decision to go forward with the Project(s) and to commit the Project(s) to the Company.
4. All information related to said Project(s) that has been submitted to the Company is true and accurate to the best of my knowledge.

FURTHER AFFIANT SAYETH NAUGHT.



Sworn to before me and subscribed in my presence this 14th day of Dec., 2012

Sally H. McCrook  
Notary  
Exp. 6/18/13

Affidavit of Customer Legal Name – Exhibit A

STATE OF OHIO )

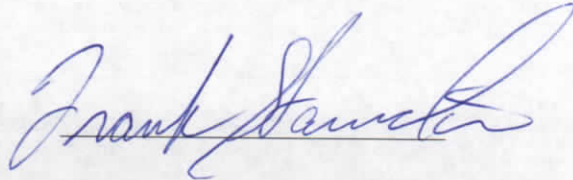
COUNTY OF )

SS:

I, Frank ~~Stawicki~~ <sup>STAWICKI</sup>, being first duly sworn in accordance with law, deposes and states as follows:

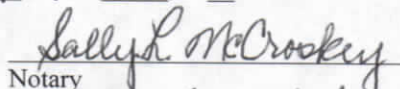
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2. The Customer has agreed to commit certain energy efficiency projects to The Cleveland Electric Illuminating Company ("Company"), which are the subject of the agreement to which this affidavit is attached ("Project(s)").
3. In exchange for making such a commitment, the Company has agreed to provide Customer with a Rider Exemption ("Incentive"). This Incentive was a critical factor in the Customer's decision to go forward with the Project(s) and to commit the Project(s) to the Company.
4. All information related to said Project(s) that has been submitted to the Company is true and accurate to the best of my knowledge.

FURTHER AFFIANT SAYETH NAUGHT.



Sworn to before me and subscribed in my presence this 4th day of Dec. 2012

Notary

  
Exp. 6/18/13

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

**Commission of Ohio Docketing Information System on**

**5/15/2013 2:25:29 PM**

**in**

**Case No(s). 13-0064-EL-EEC**

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