

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

Case No.: 13-1197-EL-EEC

Mercantile Customer: The Chilcote Company dba Tap Packaging Solutions

Electric Utility: The Cleveland Electric Illuminating Company

Program Title or 2013 Compressor Upgrade

Description:

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

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: The Chilcote Company dba Tap Packaging Solutions

Principal address:2160 Superior Ave., Cleveland, OH 44114

Address of facility for which this energy efficiency program applies:2140 Superior Ave., Cleveland, OH

Name and telephone number for responses to questions: Doug Roof - 216.535.0319 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.
В)	Ene	rgy 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: 31,790 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

Revised June 24, 2011

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:	kV	V	h
Alliluai	savings.	 ΚV	٧	Τſ

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.
В)	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):
	kW

Revised June 24, 2011

# 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 custor	ner is applying for:
	○ Option	on 1: A cash rebate reasonable arrangement.
	OR	
		on 2: An exemption from the energy efficiency cost recovery anism implemented by the electric utility.
	OR	
	Com	mitment payment
В)	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 \$1907. (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.)

Revised June 24, 2011 -6-

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

# **Section 6: Cost Effectiveness**

OR

program.)

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 \_

Revised June 24, 2011 -7-

# 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.

Revised June 24, 2011 -8-



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

Case No.: 13-1197-EL-EEC

State of Ohio:

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

1. I am the duly authorized representative of:

The Chilcote Company, dba Tap Vaclaging Solutions
[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 30 th day of November, 2013 Month/Year

Signature of official administering oath

My commission has no expiration date. Section 147.03 R.C.

My commission expires on No Expiration

Print Name and Titl

Customer Legal Entity Name: The Chilcote Company dba Tap Packaging Solutions

Site Address: Tap Packaging Solutions
Principal Address: 2160 Superior Ave

Proje No		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	Compressor Replacement Project	replaced fully functional inlet modulation Sulair 12-50 H or 50 HP Compressor and Junior (SB25 compressors with two new load/unload capacity control Boge C30 compressors. For this application, inlet modulation control is less efficient than load/unload control. Sea Attachment A 1 for compressor behalving lates sheet.	Third party conducted compressed air evaluation by logging compressed air usage over one week (7 day or 168 hour) period of time. Vendor used data and interviews with customer operations and provided energy saving projections for new compressor configuration (IPMVP Option A). See Attachment B.1 and Attachment B.2	repairs compressor could be kept running beyond the	N/A

Docket No. 13-1197 Site: 2160 Superior Ave Customer Legal Entity Name: The Chilcote Company dba Tap Packaging Solutions

Site Address: Tap Packaging Solutions

Principal Address: 2160 Superior Ave

	Unadjusted Usage, kwh (A)	Weather Adjusted Usage, kwh (B)	Weather Adjusted Usage with Energy Efficiency Addbacks, kwh (c) Note 1	
2012	1,565,893	1,565,893	1,565,893	
2011	1,513,019	1,513,019	1,513,019	
2010	1,520,757	1,520,757	1,520,757	
Average	1,533,223	1,533,223	1,533,223	

Project Number	Project Name	In-Service Date	Project Cost \$	50% of Project Cost \$	KWh Saved/Year (D) counting towards utility compliance	KWh Saved/Year (E) eligible for incentive	Utility Peak Demand Reduction Contribution, KW (F)	Prescriptive Rebate Amount (G) \$	Eligible Rebate Amount (H) \$ Note 2
1	Compressor Replacement Project	02/28/2013	\$27,000	\$13,500	31,790	31,790		\$2,543	\$1,907
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-	-	-		
					-		-		
		Total	\$27,000		31,790	31,790	0	\$2,543	\$1,907

**Docket No.** 13-1197

Site: 2160 Superior Ave

#### Notes

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

<sup>(1)</sup> 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.



#### **Exhibit 3 Utility Cost Test**

UCT = Utility Avoided Costs / Utility Costs

Project	Total Annual Savings, MWh	Cost		ed Utility Cost \$	Cash Rebate \$	Administrator Variable Fee \$	Total Utility Cost \$	UCT
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)
1	32	\$ 308	\$ \$ 9,	300 \$ 4,050	\$1,907	\$318	\$ 6,275	1.6

Total	32	\$ 308	9,800	4,050	\$1,907	\$318	6,275	1.6

#### **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)

The Chilcote Company dba Tap Packaging Solutions  $\sim$  Tap Packaging Solutions Docket No. 13-1197

**Site:** 2160 Superior Ave



Ohio Edison • The Illuminating Company • Toledo Edison

# **Mercantile Customer Program - Custom Project Rebate Calculator**

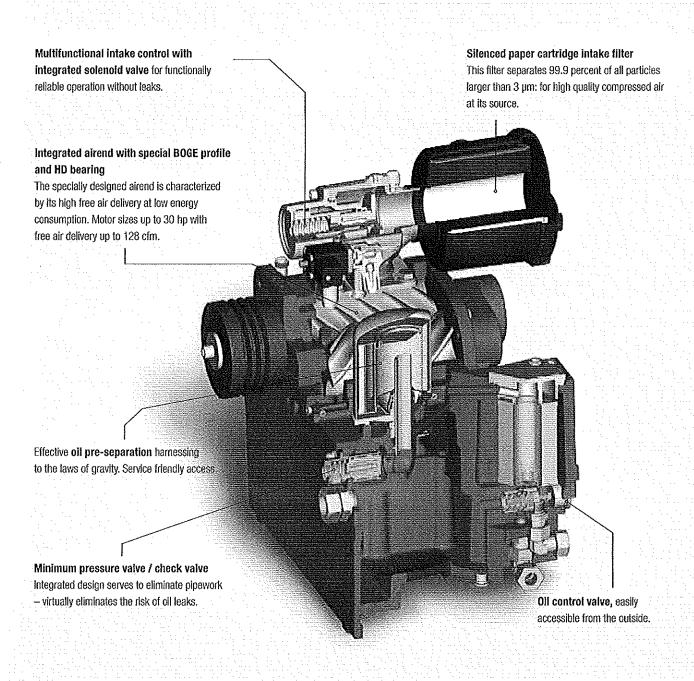
Project Name and Number:	Compressor Upgrade
Site Name:	Tap Packaging Solutions
Completed by (Name):	Bruce Air
Date completed:	2/28/2013

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
Compressor upgrade	31,790	2543.20
Total Project Energy Savings kWh	31,790	
Total Custom Prescriptive	Rebate Amount \$	\$ 2,543.20

# Notes about this rebate calculation:

Project involved replacement of fully functional 50 HP Sullair and 25 HP Quincy compressors. As a result of several air audits, found that 50 HP unit is running majority of the time. No control deciding which compressor to run. Audits show CFM produced, but necessarily actual system demand. Ave. usage over weeklong period of time is 49 CFM. Annual usage based on 5000 hours run time. From looking at audits and onsite analysis, compressor vendor determined demand to be slightly greater than capacity of 25 HP Quincy (103 CFM @ 125 psig), but significantly below 50 HP Sullair (215 CFM @ 125 psig), and that 25 HP should not be required to run. New compressor selected is 30 HP (127 CFM @ 125 psig). Should be able to meet demand of system for vast majority of the time if not at all times. Therefore, calculations provided only detail savings between baseline 50 HP Sullair and new baseline 30 HP Boge. See savings calculations attachment (Attachment B.2) for further detail.

# The C-series up to 30 hp: This is the way compressors are made today! Design advantages.

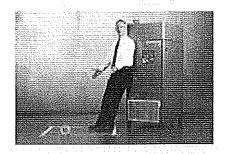


The state-of-the-art compressor: Extremely quiet, compact & efficient — the "large" BOGE C-series has set industry standard in specific power and sound pressure values. The BOGE compact module enables short distances and less pipelines — for a highly efficient and reliable compressor solution. Depending on your requirements, the C-series up to 30 hp can be equipped frequency control or heat recovery: This is the way compressors are made today!



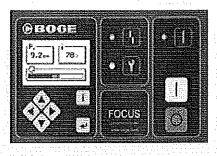
# INTEGRATED DESIGN

The integration of all essential components in the compact module serves to eliminate pipework and to reduce flow losses; for maximum operating dependability and efficiency!



#### COMPACT EFFICIENCY

The BOGE C-series is engineered to generate high free air deliveries in continuous operation and in a incomparably efficient manner. Due to its compact design space requirements are kept to a minimum.



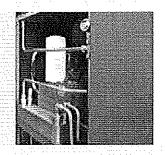
#### CONTROL

FOCUS control with LC display and pressure sensor technology is fitted standard and includes an integrated energy efficiency display as well as additional monitoring and control options. FOCUS software now includes the ability to control up to three other compressors, freeze protection and leak monitoring.



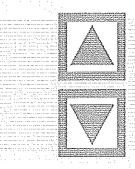
### **MAXIMUM EFFICIENCY**

The BOGE C-series up to 30 hp is characterized by its industry leading specific power ratios — for efficient compressed air supply.



# **OPTIONAL HEAT RECOVERY**

A heat recovery system can be added as an option. Up to 94 percent of the input electrical energy is dissipated through the cooling medium (air or water) and can be recovered for space heating or pre-heating domestic water.



# **OPTIONAL FREQUENCY CONTROL**

The frequency controlled option ensures a continuous volume flow between 25 and 100 percent. This ensures adaptation to the momentary demand of the compressed air system. Soft starting also avoids undue wear and tear and prolongs the service life of the compressor.

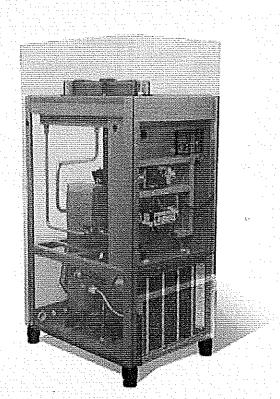
# Screw compressor **C 15** to **C 30**Compressed air station **C 20 F** to **C 30 F**





Effective free air delivery: 1.33 – 3.82 m³/min, 46 – 135 cfm

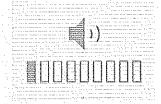
Pressure range: 8 to 13 bar, 115 to 190 psig Motor range: 11 - 22 kW, 15 - 30 hp





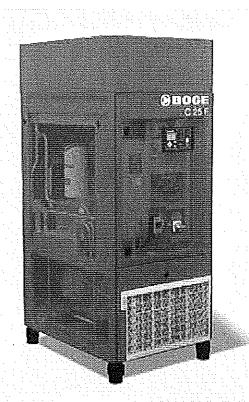
# **MAXIMUM EFFICIENCY**

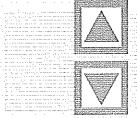
The BOGE C-series up to 30 hp is characterized by its industry leading specific power ratios. You rarely come across such compact screw compressor efficiency.



# **EXTREMELY QUIET**

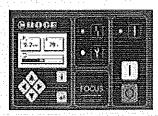
All C-series compressors feature very low sound pressure levels.





## FREQUENCY CONTROL

The optional frequency converter ensures a continuous volume flow between 25 and 100 percent. This allows adaptation to the momentary demand of the compressed air system. Soft starting also avoids undue wear and tear and prolongs the service life of the compressor.



## CONTROL

The compressor is controlled by the FOCUS control system which includes an integrated efficiency display as well as additional monitoring and control options.

FOCUS is programmed as a master controller and can control up to three machines.

Real winners: The belt driven C-series models up to 30 hp are highly efficient and extremely quiet in operation requiring only a minimum footprint. With frequency controlled units you can realize significant energy savings and prolonged compressor life. An integrated design means short distances and extremely low pressure losses. As well as generating industry leading outputs, the C-series is also very energy efficient.

BOGE.	Мах. р	ressure	Effecti	ve free	Mo	tor	Dimensions	Compressed	Weight
Model			air del			ver	WxDxH	air outlet	100
	bar		mi?/min	cim	historia de la compansión de la compansi		inches	NDT 4	lis.
· C 15	7	100	1.74	62	11.0	1	30.4 x 41.6 x 68.3		1035
C 15	8	115/125	1.74	62	11.0	1	•	1	1035
C 15	10	150	1.53	54	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1035
C 15	13	190	1.33	47	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1035
C 16	7	100	1.98	70	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1060
C 16	8	115/125	1.89	66	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1060
C 16	10	150	1.63	57	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1060
C 16	13	190	1.35	47	11.0	15	30.4 x 41.6 x 68.3	NPT 1"	1060
C 20	7	100	2.69	95	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	1082
C 20	8	115/125	2.55	90	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	1082
C 20	10	150	2.25	79	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	1082
C 20	13	190	1.89	66	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	1082
C 25	7	100	3.28	116	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1111
C 25	8	115/125	3.10	109	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1111
C 25	10	150	2.71	95	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1111
C 25	13	190	2.32	81	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1111
<del>- C 30</del>	7	100	3.82	135	22.0	30	30,4 x 41.6 x 68,3	NPT 1"	1193
> ; C 30	8	115/125	3.62	127	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	T193
C 30	<u> 10</u>	150	3.21	<del>113</del>	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	1193
C 30	13.	- 190	2.71	95	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	1193

<sup>\*</sup> Free air delivery for the complete package in accordance with ISO 1217, Appendix C, at 68°F ambient temperature and maximum pressure. Emitted sound pressure values from 63 dB(A) according to DIN EN ISO 2151:2009

BOGE	Max. pressure		Effective free		Motor		Dimensions	Compressed	Weight
Model		l	air de			NOT.	W x D x H inches	air outlet	lbs.
	bar	19161	m9/min		kW	ָין װ יין װ			Annual Control of the
C 20 F	8	115	0.49-2.55	23-90	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	988
C 20 F	10	150	0.45-2.25	20-79	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	988
C 20 F	13	190	0.54-1.89	17-66	15.0	20	30.4 x 41.6 x 68.3	NPT 1"	988
C 25 F	8	115	0.65-3.10	27-109	18.5	. 25	30.4 x 41.6 x 68.3	NPT 1"	1122
C 25 F	10	150	0.61-2.71	24-95	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1122
C 25 F	13	190	0.45-2.32	20-81	18.5	25	30.4 x 41.6 x 68.3	NPT 1"	1122
C 30 F	8	115	0.80-3.62	32-127 <sup>-</sup>	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	1038
C 30 F	10	150	0.69-3.21	28-113	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	1038
C 30 F	13	190	0.55-2.71	24-95	22.0	30	30.4 x 41.6 x 68.3	NPT 1"	. 1038

Free air delivery for the complete package in accordance with ISO 1217, Appendix E, at 68% ambient temperature and maximum pressure. Emitted sound pressure values from 63 dB(A) according to DIN EN ISO 2151:2009).

# Apparelication

drawn into the cylinder. With this arrangement, "five-step control" is normal, allowing steps of 0-25-50-75-100 percent capacity.

On lubricant injected rotary air compressors, when the upper pressure setting is reached, a pressure switch sends a signal to close a valve at the inlet of the compressor and opens a blow-down valve installed in a line coming from the compressor discharge but prior to a discharge check valve.

When the inlet valve is closed, it reduces the mass flow of air through the compressor but increases the compression ratio. When the blow-down valve is opened, the compressor discharge pressure and the compression ratio are progressively lowered, while the discharge check valve prevents back flow from the system or receiver. The reduced mass flow and compression ratio result in a reduced energy requirement.

In the case of lubricant injected rotary screw compressors, the rate of blow down must be limited to prevent foaming of the lubricant in the sump/separator vessel, so the fully unloaded power is not reached until blow down is complete. The average kW input power depends on the amount of receiver/system volume (see Figure A.2.0).

In lubricant-free rotary screw compressors, load/unload is the most common type of control. No blow down of a sump/separator is needed and the power goes from full load to unloaded without any time for blow down. An adequate receiver or system volume is necessary to prevent too frequent operation. Load/unload operation is also available with some centrifugal compressors.

# Average power vs. Capacity of lubricant injected rotary compressor with load/unload capacity control

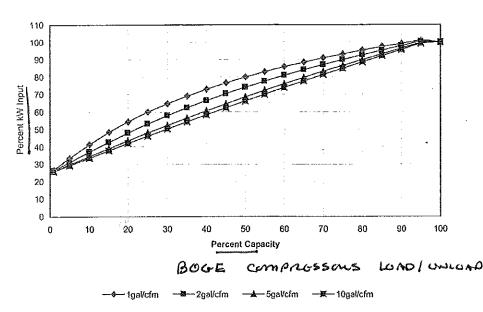


Figure A.2.o. Effects of receiver size on average power vs. percent capacity of lubricant injected rotary screw compressor with load/unload capacity control.

# Inlet Valve Modulation and Lubricant Injected Rotary Screw Compressors

inlet valve modulation, which is used only on lubricant injected rotary air compressors (see also centrifugal compressor capacity controls), allows compressor capacity to be adjusted to match demand. A regulating valve senses system or discharge pressure over a prescribed range (usually a range of 10 psi, although some newer microprocessor controllers could have a range of about 3 psi) and sends a proportional pressure to operate the inlet valve. Closing (or throttling) the inlet valve causes a pressure drop across it, reducing the inlet pressure at the compressor and, hence, the mass flow of air. Because the pressure at the compressor inlet is reduced while discharge pressure is rising slightly, the compression ratios are increased so that energy savings are somewhat limited. Inlet valve modulation normally is limited to the range from 100 percent to about 40 percent of rated capacity, at which point the discharge pressure will have reached fullload pressure plus 10 psi. It is then assumed that demand is insufficient to require continued air discharge to the system. At this point, the compressor will be unloaded (as described in the previous section on Load/Unload Control) to reduce input power requirements.



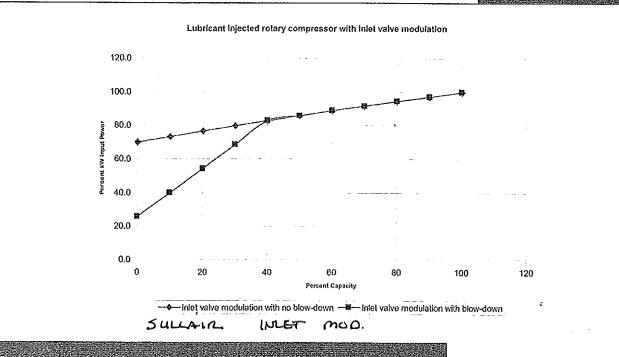


Figure A.Q.p. Lubricant injected rotary screw compressor with inlet yalve modulation.

The curve shown in Figure A.2.p is typical of a lubricant injected rotary screw compressor with inlet valve modulation from 100 percent capacity down to 40 percent capacity. This range may vary with manufacturer.

Figure A.2.p is based upon a discharge pressure range of 100 to 110 psig. As discharge pressure rises from 100 to 110 psig, a proportional pressure regulator provides a control pressure from 0 to 30 psig, which progressively closes the inlet valve. Note that if inlet valve modulation was allowed to go

Best Practices for Compressed Air Systems

125

# ATTACHMENT B. 1 CALCUATIONS

#### Tap Compressor Upgrade Project - 2013

#### Project Background

Existing Conditions

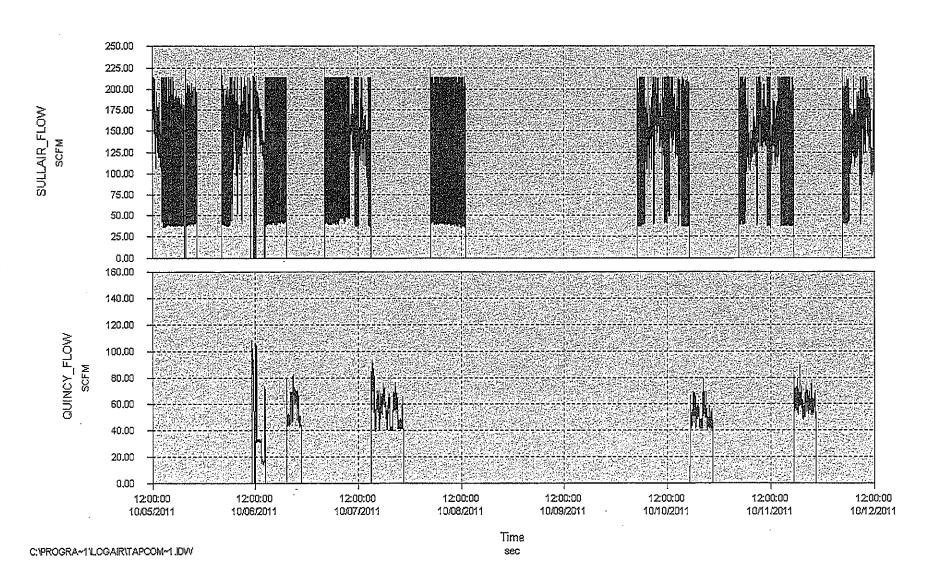
- Project involded replacement of fully functional 50 HP Sullair and 25 HP Quincy compressors
- 1) Customer had compressor audits conducted in 2011 and 2012. Both audits recommended replacing older compressors.
- 2) Both audits show CFM's of air that are being produced over time, but do not indicate actual plant demand. Usage is a function of which compressor staff chooses to run. Compressors have no automated control sequence. Operation is manual as needed.
- 3) From looking at audit information, and interviewing customer, compressor vendor determined that plant load requirement is slightly greater than capacity of 25 HP Quincy (103 CFM @125 PSIG) but significantly lower than the 50 HP (215 CFM @125 PSIG).
- 4) Because plant load requirement is greater than 25 HP capacity, data indicates that 50 HP compressor is selected majority of time as lead compressor and that 25 HP compressor is operated as needed. Otherwise, it is assumed data would show 25 HP running majority of time.
- 5) Data indicates ave. usage of 49 CFM over the course of one week.
- 6) Based on data from audits, follow up interviews and post installation usage, plant should never have been required to run 50 HP and 25 HP compressors together.
- 7) New system includes installation of two 30 HP Boge compressors (127 CFM @ 125 PSIG) with automatically controlled shut down of either machine when air demand is below the full output of a single compressor. This will allow for second machine to run if necessary. This has not been the case thus far.
- 8) Because second compressor usage is expected to be intermittent, calculations noted below will show the comparison of usage between the new baseline Boge 30 HP compressor (127 CFM @ 125 PSIG) and the existing baseline 50 HP Sullair.
- 9) Because the new 30 HP Boge compressor has a smaller capacity than the 50 HP, it is expected that it will run loaded at a higher percentage of time than the 50 HP.
- 10) Controls of 50 HP Sullair utilize modulating control, which throttles the inlet of the compressor to maintain plant pressure to desired setting. (looks like around 110 psig in this case). Compared to load/unload control for this type of set up, this is an inefficient type of control. See attached graphs from Compressed Air Challenge Best Practices.

#### Power calculation = (Motor BHP X .746 (kW/HP) X hour of operation) / motor efficiency

	Existing Conditions								
Sullair 12-50H Usage					Boge C30 Usage				
	Ave. air demand	49	CFM		Ave. air demand	49	CFM		
	Hours of Operation	4800	Annual Hours		Hours of Operation	4800	Annual Hours		
	Power cost / kWh	\$ 0.08			Power cost / kWh	\$ 0.08			
	Sullair 12-50 H				Boge C30				
	BHP Loaded	57.4			BHP Loaded	36.48			
	BHP Unloaded	16.0			BHP Unloaded	6.9			
	Air Capacity	215	CFM @ 125 PSIG		Air Capacity	127	CFM @ 125 PSiG		
	Motor Efficiency	90.5%	J		Motor Efficiency	93.2%	•		
	Loaded hours	1100			Loaded hours	1800			
	Unloaded hours	3700			Unloaded hours	3000			
	Loaded Power Calculation	52,047			Loaded Power Calculation	52,559			
	Unloaded Power Calculation	48,799			Unloaded Power Calculation	16,497			
	Annual Usage	100,846			Annual Usage	69,056			
	Peak kW	47			Peak kW	29			
			Annual Savings	31,790 kWh					

# OCTOBER ZON AIR AUDIT

# FLOW OF INDIVIDUAL COMPRESSORS FOR 7 DAYS (SCFM)



# Appardix 2.4.4.3

drawn into the cylinder. With this arrangement, "five-step control" is normal allowing steps of 0-25-50-75-100 percent capacity.

On lubricant injected rotary air compressors, when the upper pressure setting is reached, a pressure switch sends a signal to close a valve at the inlet of the compressor and opens a blow-down valve installed in a line coming from the compressor discharge but prior to a discharge check valve.

When the inlet valve is closed, it reduces the mass flow of air through the compressor but increases the compression ratio. When the blow-down valve is opened, the compressor discharge pressure and the compression ratio are progressively lowered, while the discharge check valve prevents back flow from the system or receiver. The reduced mass flow and compression ratio result in a reduced energy requirement.

In the case of lubricant injected rotary screw compressors, the rate of blow down must be limited to prevent foaming of the lubricant in the sump/separator vessel, so the fully unloaded power is not reached until blow down is complete. The average kW input power depends on the amount of receiver/system volume (see Figure A.2.0).

In lubricant-free rotary screw compressors, load/unload is the most common type of control. No blow down of a sump/separator is needed and the power goes from full load to unloaded without any time for blow down. An adequate receiver or system volume is necessary to prevent too frequent operation. Load/unload operation is also available with some centrifugal compressors.

# Average power vs. Capacity of lubricant injected rotary compressor with load/unload capacity control

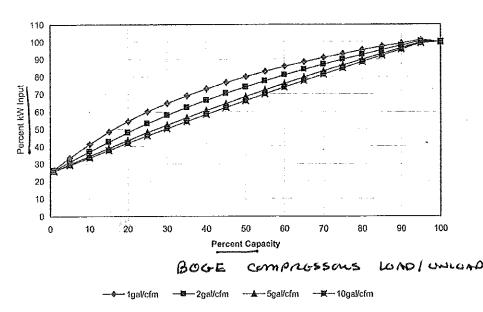


Figure A.2.o. Effects of receiver size on average power vs. percent capacity of lubricant injected rotary screw compressor with load/unload capacity control.

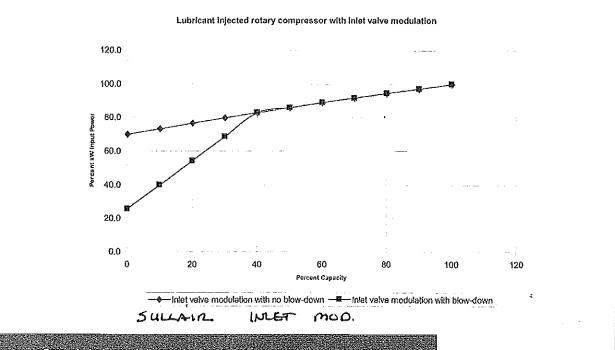
Besideratives for Compressed Air Systems

# Inlet Valve Modulation and Lubricant Injected Rotary Screw Compressors

3

felet valve modulation, which is used only on lubricant injected rotary air compressors (see also centrifugal compressor capacity controls), allows compressor capacity to be adjusted to match demand. A regulating valve senses system or discharge pressure over a prescribed range (usually a range of 10 psi, although some newer microprocessor controllers could have a range of about 3 psi) and sends a proportional pressure to operate the inlet valve. Closing (or throttling) the inlet valve causes a pressure drop across it, reducing the inlet pressure at the compressor and, hence, the mass flow of air. Because the pressure at the compressor inlet is reduced while discharge pressure is rising slightly, the compression ratios are increased so that energy savings are somewhat limited. Inlet valve modulation normally is limited to the range from 100 percent to about 40 percent of rated capacity, at which point the discharge pressure will have reached fullload pressure plus 10 psi. It is then assumed that demand is insufficient to require continued air discharge to the system. At this point, the compressor will be unloaded (as described in the previous section on Load/Unload Control) to reduce input power requirements.

Appendix 2.A.3



# Figure A.2.p. Lubricant injected rotary screw compressor with inlet valve modulation.

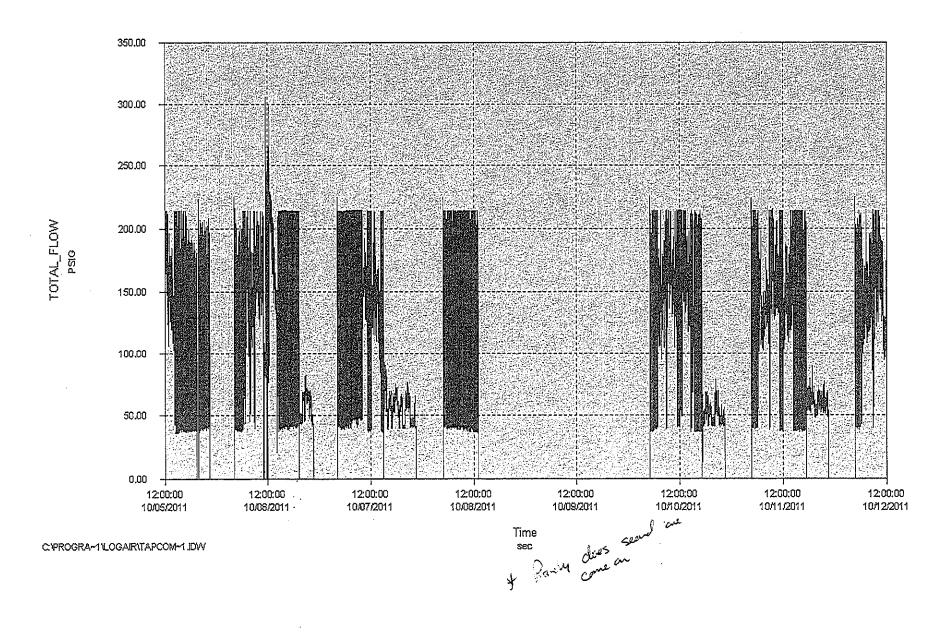
The curve shown in Figure A.2.p is typical of a lubricant injected rotary screw compressor with inlet valve modulation from 100 percent capacity down to 40 percent capacity. This range may vary with manufacturer.

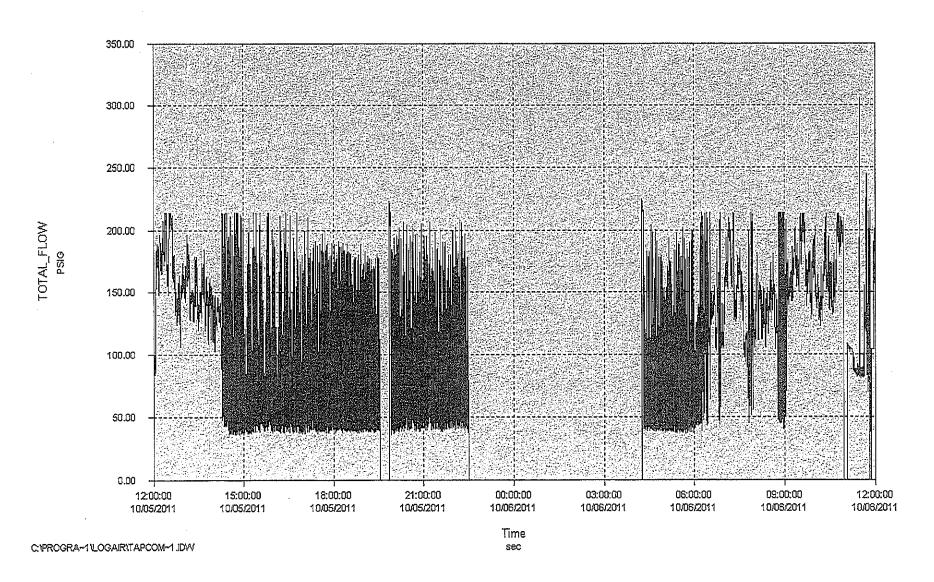
Figure A.2.p is based upon a discharge pressure range of 100 to 110 psig. As discharge pressure rises from 100 to 110 psig, a proportional pressure regulator provides a control pressure from 0 to 30 psig, which progressively closes the inlet valve. Note that if inlet valve modulation was allowed to go

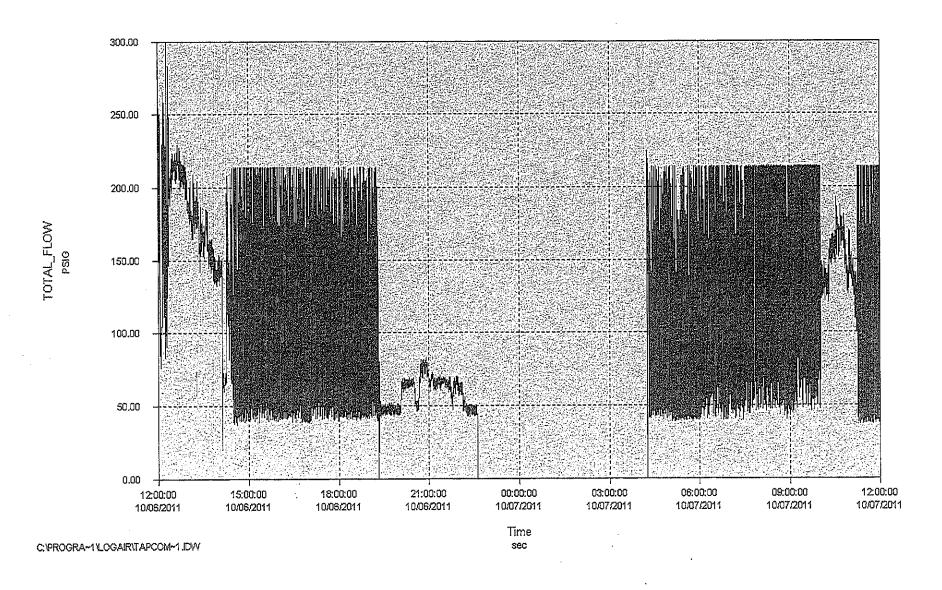
Best Practices for Compressed Air Systems

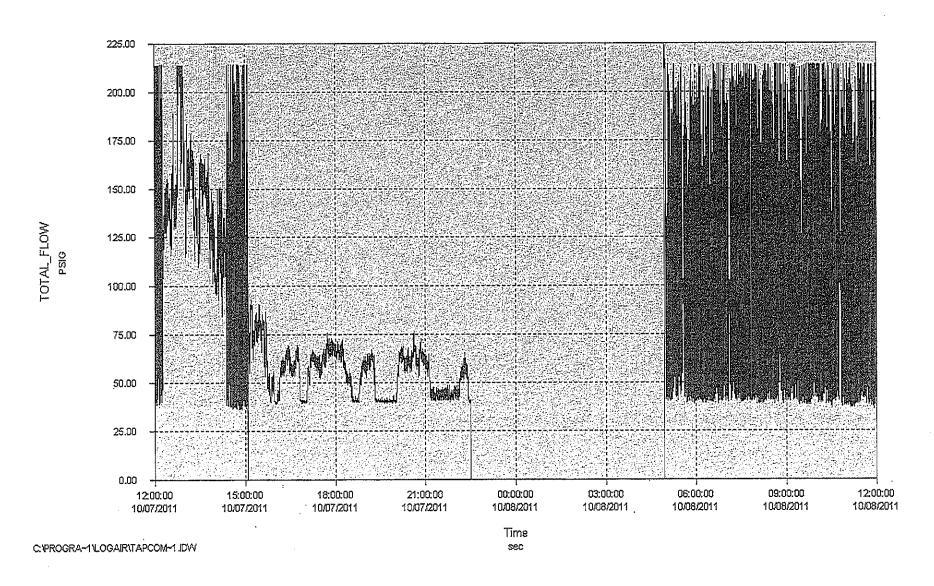
125

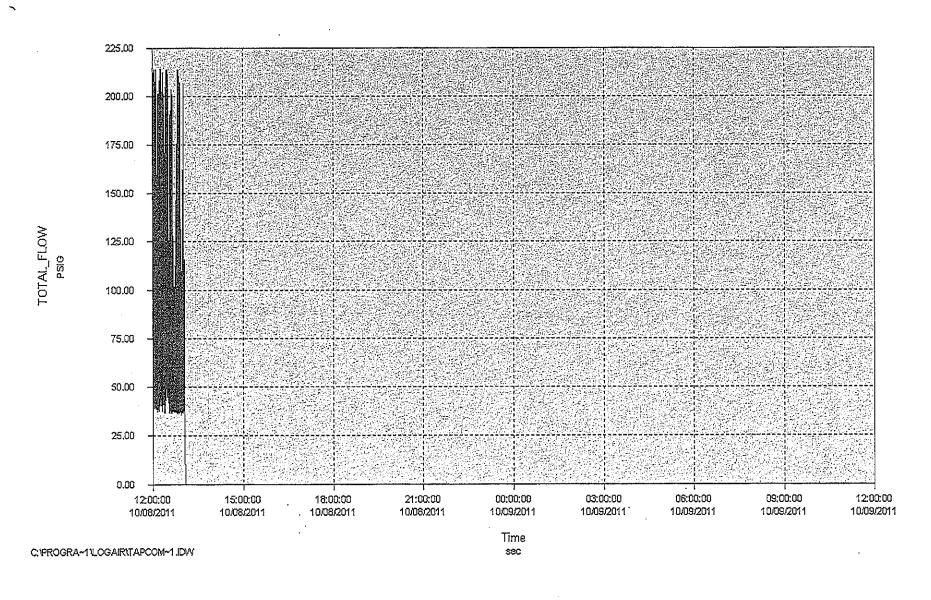
# FLOW OF INDIVIDUAL COMPRESSORS FOR 7 DAYS (SCFM)

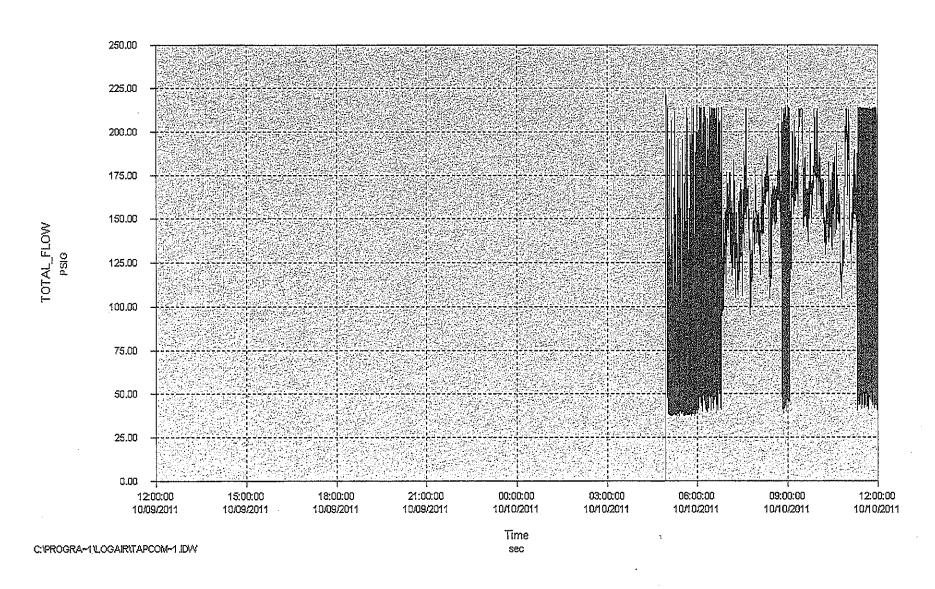


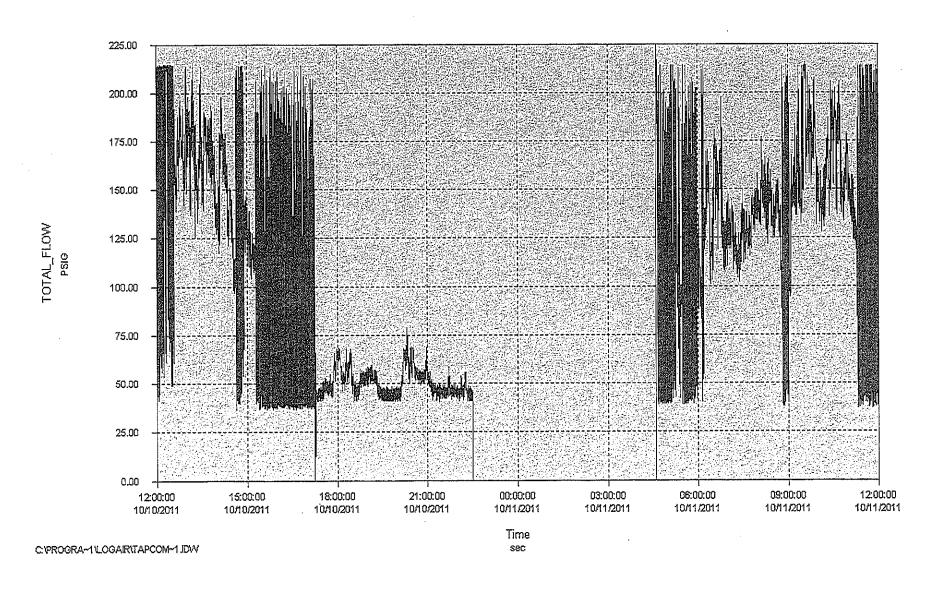


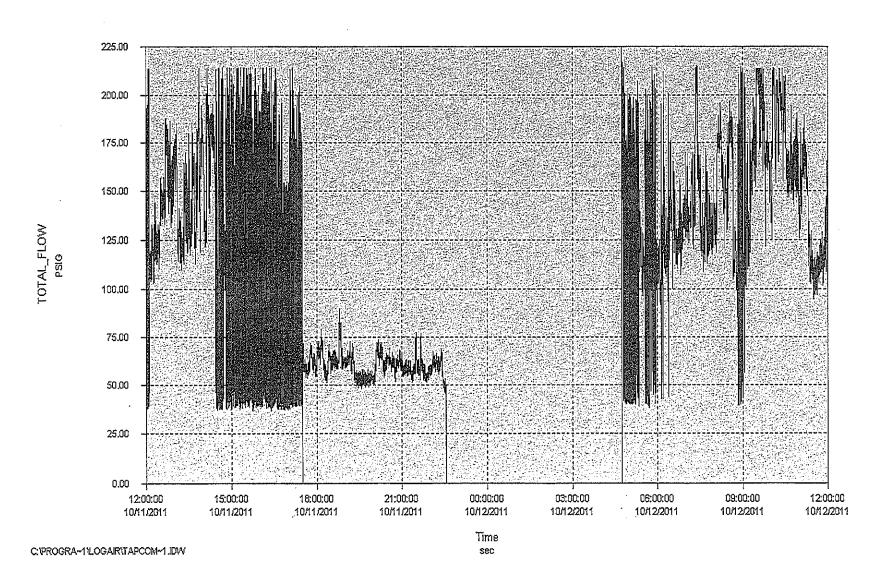




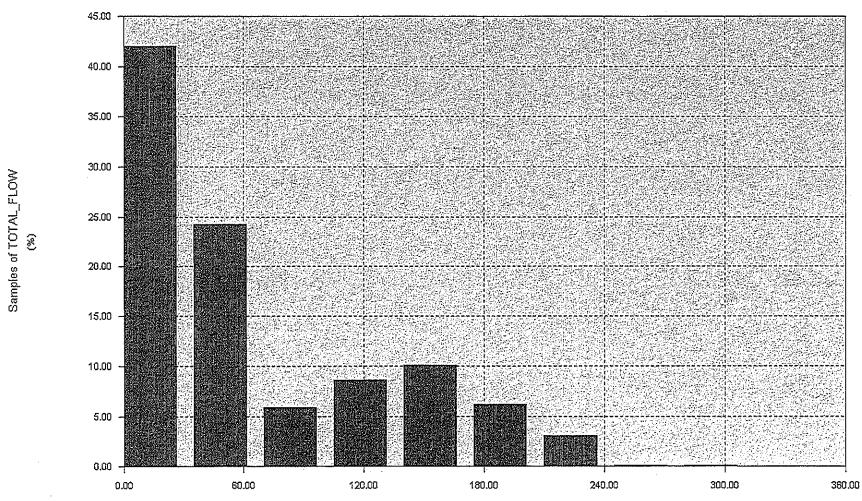




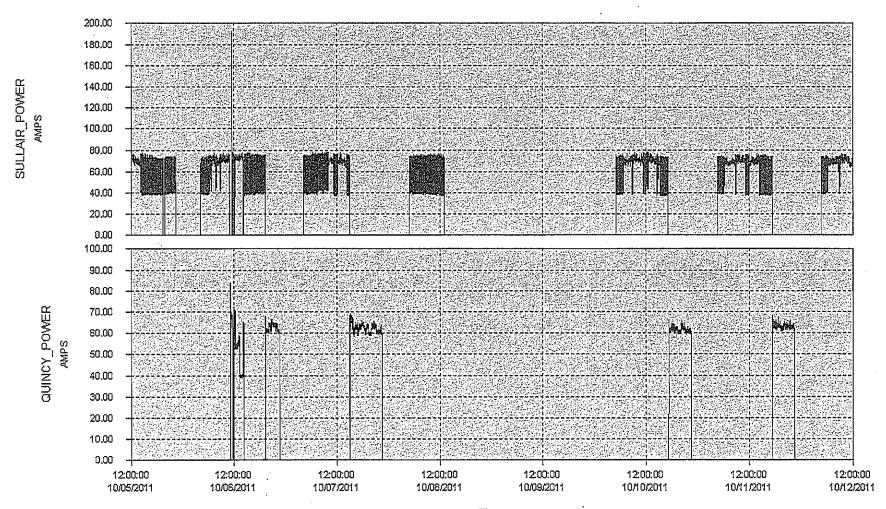




Histogram of TOTAL\_FLOW Bin Size: 35.000000 Peak of 42.03 at 0.00.

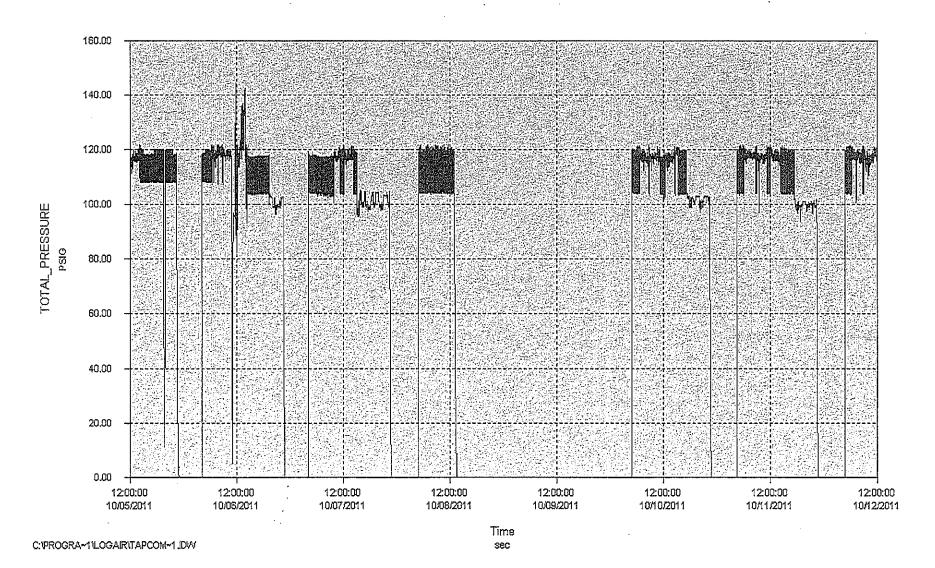


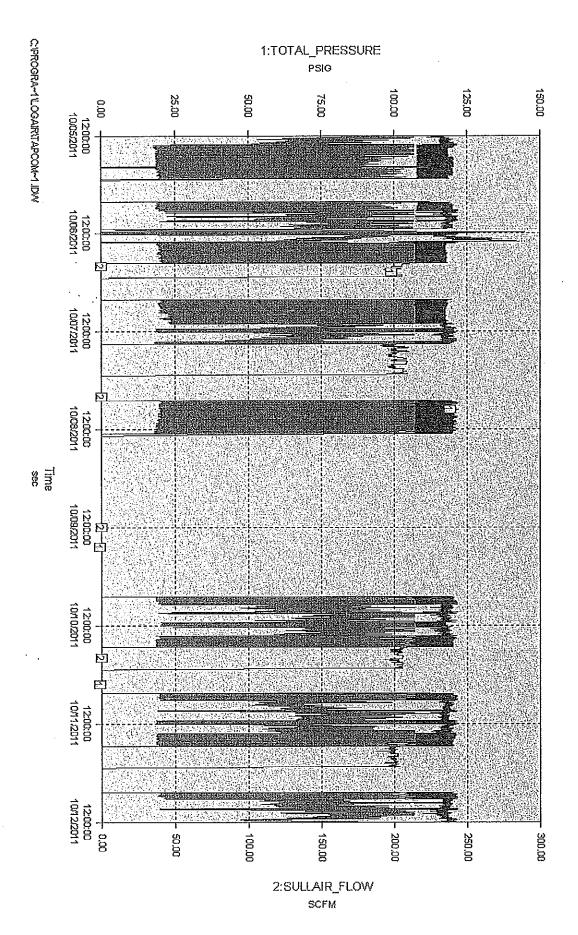
# POWER USAGE FOR INDIVIDUAL COMPRESSORS FOR 7 DAYS (AMPS)



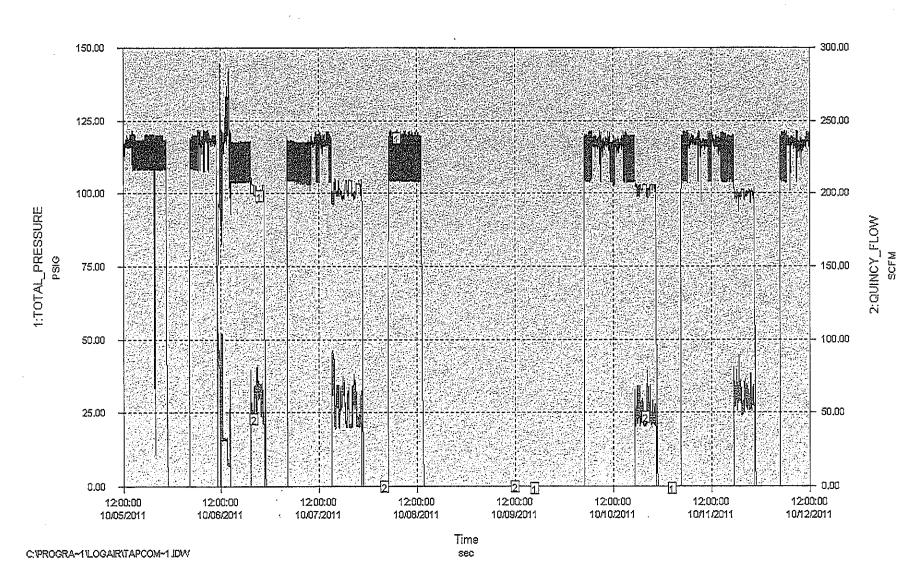
Time

# PRESSURE AFTER ALL COMPRESSORES FOR 7 DAYS (PSIG)

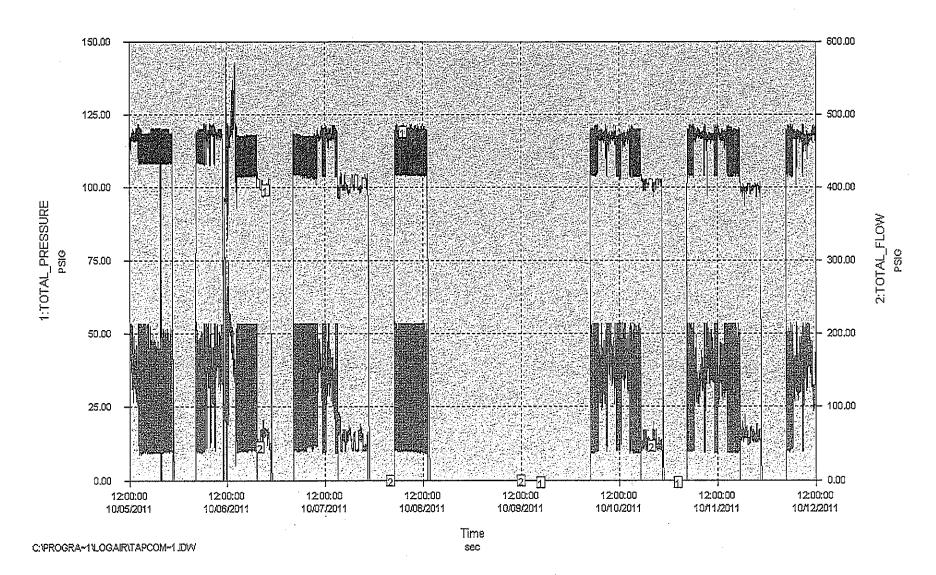


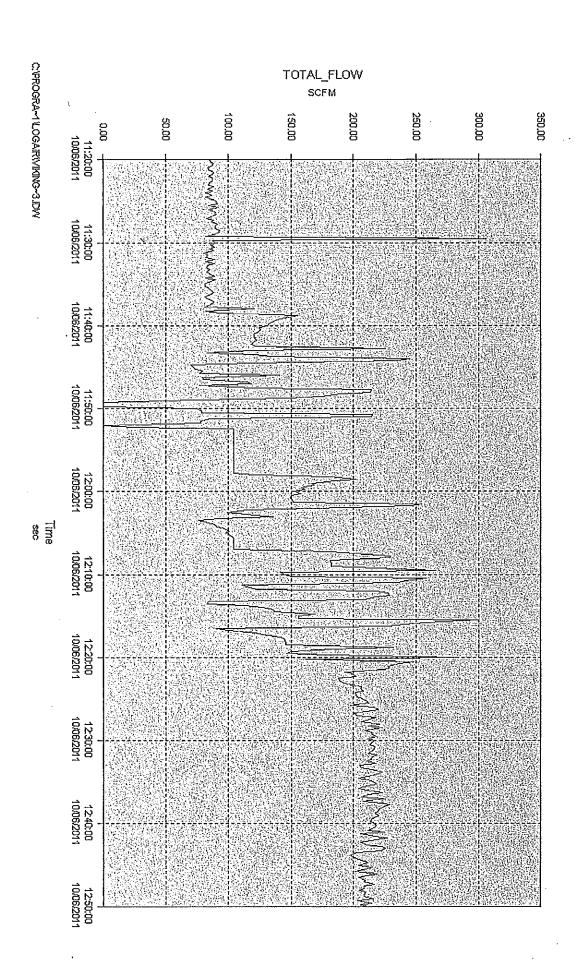


## QUINCY COMPRESSOR PRESSURE & FLOW CHART



## TOTAL COMPRESSOR PRESSURE & FLOW CHART







Ohio Edison • The Illuminating Company • Toledo Edison

# **Mercantile Customer Program - Custom Project Rebate Calculator**

Project Name and Number:	Compressor Upgrade
Site Name:	Tap Packaging Solutions
Completed by (Name):	Bruce Air
Date completed:	2/28/2013

Energy Conservation Measure	Annual Energy Savings kWh	Eligible Prescriptive Rebate Amount kWh * \$0.08
Compressor upgrade	31,790	2543.20
Total Project Energy Savings kWh		
Total Custom Prescriptive Rebate Amount \$		\$ 2,543.20

## Notes about this rebate calculation:

Project involved replacement of fully functional 50 HP Sullair and 25 HP Quincy compressors. As a result of several air audits, found that 50 HP unit is running majority of the time. No control deciding which compressor to run. Audits show CFM produced, but necessarily actual system demand. Ave. usage over weeklong period of time is 49 CFM. Annual usage based on 5000 hours run time. From looking at audits and onsite analysis, compressor vendor determined demand to be slightly greater than capacity of 25 HP Quincy (103 CFM @ 125 psig), but significantly below 50 HP Sullair (215 CFM @ 125 psig), and that 25 HP should not be required to run. New compressor selected is 30 HP (127 CFM @ 125 psig). Should be able to meet demand of system for vast majority of the time if not at all times. Therefore, calculations provided only detail savings between baseline 50 HP Sullair and new baseline 30 HP Boge. See savings calculations attachment (Attachment B.2) for further detail.

# Mercantile Customer Project Commitment Agreement Cash Rebate Option

THIS MERCANTILE CUSTOMER PROJECT COMMITMENT AGREEMENT ("Agreement") is made and entered into by and between The Cleveland Electric Illuminating Company, its successors and assigns (hereinafter called the "Company") and The Chilcote Company dba Tap Packaging Solutions, Taxpayer ID No. 34-0142230 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 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 the Public Utilities Commission of Ohio's ("Commission") September 15, 2010 Order in Case No. 10-834-EL-EEC, desires to pursue a cash rebate of some of the costs pertaining to its Customer Energy Project(s) ("Cash Rebate") and is committing the Customer Energy Project(s) as a result of such incentive.

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

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

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

1. Customer Energy Projects. Customer hereby commits to the Company and Company accepts for integration into the Company Plan the Customer Energy Project(s) set forth on attached Exhibit 1. Said commitment shall be for the life of the Customer Energy Project(s). Company will incorporate said project(s) into the Company Plan to the extent that such projects qualify. In so committing, 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 appropriate, "Benefits"). In the event that the use of any such project by the Company in any way affects such Benefits, and upon written request from the Customer, Company will release said Customer's Energy Project(s) to the extent necessary for Customer to meet the prerequisites for such Benefits. Customer acknowledges that such release (i) may affect Customer's cash rebate discussed in Article 3 below; and (ii) will not affect any of Customer's other requirements or obligations.
- c. Any future Customer Energy Project(s) committed by Customer shall be subject to a separate application and, upon approval by the Commission, said projects shall become part of this Agreement.
- d. Customer will provide Company or Company's agent(s) with reasonable assistance in the preparation of the Commission's standard joint application for approval of this Agreement ("Joint Application") that will be filed with the Commission, with such Joint Application being consistent with then current Commission requirements.
- e. Upon written request and reasonable advance notice, Customer will grant employees or authorized agents of either the Company or the Commission reasonable, pre-arranged access to the Customer Energy Project(s) for purposes of measuring and verifying energy savings and/or peak demand reductions resulting from the Customer Energy Project(s). It is expressly agreed that consultants of either the Company or the Commission are their respective authorized agents.
- 2. Joint Application to the Commission. The Parties will submit the Joint Application using the Commission's standard "Application to Commit Energy Efficiency/Peak Demand Reduction Programs" ("Joint Application") in which they will seek the Commission's approval of (i) this Agreement: (ii) the commitment of the Customer Energy Project(s) for inclusion in the Company Plan; and (iii) the Customer's Cash Rebate.

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

- A narrative description of the Customer Energy Project(s), including but not limited to, make, model and year of any installed and/or replaced equipment;
- ii. A copy of this Agreement; and
- iii. A description of all methodologies, protocols, and practices used or proposed to be used in measuring and verifying program results.

- 3. Customer Cash Rebate. Upon Commission approval of the Joint Application, Customer shall provide Company with a W-9 tax form, which shall at a minimum include Customer's tax identification number. Within the greater of 90 days of the Commission's approval of the Joint Application or the completion of the Customer Energy Project, the Company will issue to the Customer the Cash Rebate in the amount set forth in the Commission's Finding and Order approving the Joint Application.
  - a. Customer acknowledges: i) that the Company will cap the Cash Rebate at the lesser of 50% of Customer Energy Project(s) costs or \$250,000; ii) the maximum rebate that the Customer may receive per year is \$500,000 per Taxpayer Identification Number per utility service territory; and iii) if the Customer Energy Project qualifies for a rebate program approved by the Commission and offered by the Company, Customer may still elect to file such project under the Company's mercantile customer self direct program, however the Cash Rebate that will be paid shall be discounted by 25%; and
  - b. Customer acknowledges that breaches of this Agreement, include, but are not limited to:
    - i. Customer's failure to comply with the terms and conditions set forth in the Agreement, or its equivalent, within a reasonable period of time after receipt of written notice of such non-compliance;
    - ii. Customer knowingly falsifying any documents provided to the Company or the Commission in connection with this Agreement or the Joint Application.
  - c. In the event of a breach of this Agreement by the Customer, Customer agrees and acknowledges that it will repay to the Company, within 90 days of receipt of written notice of said breach, the full amount of the Cash Rebate paid under this Agreement. This remedy is in addition to any and all other remedies available to the Company by law or equity.
- 4. Termination of Agreement. This Agreement shall automatically terminate:
  - a. If the Commission fails to approve the Joint Agreement;
  - b. Upon order of the Commission; or
  - c. At the end of the life of the last Customer Energy Project subject to this Agreement.

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

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

connection with this Agreement, provided that such employees, directors, attorneys, consultants and agents have been advised of the confidential nature of this information and through such disclosure are deemed to be bound by the terms set forth herein.

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

### If to the Company:

FirstEnergy Service Company 76 South Main Street Akron, OH 44308 Attn: Victoria Nofziger

Telephone: 330-384-4684 Fax: 330-761-4281

Email: vmnofziger@firstenergycorp.com

#### If to the Customer:

The Chilcote Company dba Tap Packaging Solutions Customer Name

2160 Superior Ave. Address

City, State Zip Cleveland, Ohio 44114 Attn: Doug Roof

Telephone: 216-535-0319 Fax: 216-535-0619 Email: droof@tap-usa.com or to such other person at such other address as a Party may designate by like notice to the other Party. Notice received after the close of the business day will be deemed received on the next business day; provided that notice by facsimile transmission will be deemed to have been received by the recipient if the recipient confirms receipt telephonically or in writing.

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

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

The Cleveland Electric Huminating Company_
(Company)
by: Jan C. Durya
Title: V.P. Of Energy Efficiency
Date: $1(-22-13)$
The Chilcote Company dba Tap Packaging Solution
By: Customers I word !
Title: Controller of Treasurer
Date: 11-26-2

Affidavit of The Chilcote Company dba Tap Packaging Solutions

— Exhibit \_A \_

STATE OF OHIO )

SS:

COUNTY OF Cuyahoga )

- I, Doug Roof, being first duly sworn in accordance with law, deposes and states as follows:
  - I am the Treasurer of The Chilcote Company dba Tap Packaging Solutions ("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 Cash ("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.

TARASUNER

The Chilcote Compand Aba Tap Packaging Solutions

Sworn to before me and subscribed in my presence this 20 Aday of Nov., 20/3.

Notary

DENNIS J: LEE Attorney Notary Public-State of Ohio My commission has no expiration date. Section 147.03 R.C.

SEAT

This foregoing document was electronically filed with the Public Utilities

**Commission of Ohio Docketing Information System on** 

12/23/2013 11:32:27 AM

in

Case No(s). 13-1197-EL-EEC

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