

# INDUSTRIAL REFRIGERATION STUDY WORKSHEET

January 1, 2019 – December 31, 2019

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## PROGRAM OVERVIEW

The ComEd Energy Efficiency Program Industrial Refrigeration Study is available to qualifying customers within the ComEd service territory. The goals of this program are to help you identify opportunities to improve the efficiency of your facility’s industrial refrigeration system and reduce energy costs without adversely affecting system operations. In addition, ComEd provides a one-time incentive payment of \$0.07 per annual kWh saved after study recommendations are properly implemented and verified. Eligible annual kWh savings are determined through final measurement and verification activities. The total incentive will not exceed the total eligible implementation costs and the total incremental costs for improvements recommended in the study.

## MINIMUM CUSTOMER COMMITMENT

As stated in the Terms and Conditions of the Industrial Systems Study application form, if accepted into the program, the customer agrees to:

- Provide access to the facility and provide time for facility personnel to interface with the service provider during all phases of the project.
- Provide and assist with reporting and collection of information pertaining to the operation of the industrial system during all phases of the project.
- Confirm that the minimum installed capacity is at least 500 hp and agrees to spend at least \$15,000 on the implementation of measures identified through the study with an estimated total project simple payback of 1.5 years or less based upon energy savings and estimated cash incentives.

The Industrial Refrigeration Study will be considered complete when the customer commitment (listed above) is met, and the mutually accepted study measures are fully installed and verified or 120 days from the Customer receiving the final version of the investigation study report. The customer may submit a request for an extension if additional time is needed to complete implementation.

Any recommended study measures not installed within the same timeframe as the mutually accepted study measures may be eligible for incentives through other ComEd Energy Efficiency Program offerings programs. The ComEd Energy Efficiency Program team is available to assist with any additional incentive paperwork.

Facility Name:

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## FACILITY GENERAL DESCRIPTION

Briefly describe the type of facility including square footage and hours of operation.

Briefly describe past energy efficiency projects or studies completed at the facility.

Briefly describe any currently planned energy efficiency, renovation, or equipment replacement/upgrade projects for the facility.

Are there any scheduling issues that could affect the industrial refrigeration study or subsequent measure implementation (e.g., major renovations or equipment replacements/upgrades)?

## FACILITY STAFF

Please identify key individuals responsible for the operation of the facility. Also indicate individuals who will act as a part of the owner's project team by indicating whether they are able to assist.

NAME	POSITION	YEARS IN POSITION	FACILITY RESPONSIBILITIES	ABLE TO ASSIST? (Y/N)

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## MANAGEMENT

**What are the top two barriers to improving the energy efficiency of the industrial refrigeration system?**

Not enough staff time

Lack of budget for efficiency improvements

Capital priorities elsewhere

Paybacks are too long

Primary focus is on production

Lack of accountability for system energy costs

Lack of information about opportunities

Lack of in-house technical expertise

Lack of training

Management approval

Other: \_\_\_\_\_

Please list all system components that are currently located at your facility. Add additional pages as necessary.

## REFRIGERATION COMPRESSORS

MANUFACTURER/MODEL	SIZE (hp)	COMPRESSOR TYPE (e.g., Scroll, Screw, Reciprocating)	VFD (Y/N)	SUCTION (Temperature or Pressure)	DISCHARGE (Temperature or Pressure)	OIL COOLING TYPE	BACK-UP (Y/N)	AGE (Years)	ANNUAL OPERATING HOURS
1									
2									
3									
4									
5									
6									
7									
8									

## CONDENSERS

MANUFACTURER/MODEL	TOTAL FAN POWER (hp)	FAN CONTROL (VFD, On/Off, 2-Speed)	TYPE (Evaporative Condenser or Air Cooled)	AGE (Years)
1				
2				
3				
4				
5				
6				
7				
8				

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EVAPORATORS						
MANUFACTURER/MODEL	TOTAL FAN POWER (hp)	QUANTITY	FAN CONTROL (VFD, On/Off, 2-Speed)	SUCTION TEMPERATURE (°F)	SPACE TEMPERATURE (°F)	AGE (Years)
1						
2						
3						
4						
5						
6						
7						
8						

DEMAND SIDE LOADS				
LOAD	QUANTITY	TEMPERATURE RANGE (°F)	LOAD (% of system OR tons)	SCHEDULED HOURS AND DAYS OF OPERATION
1				
2				
3				
4				
5				
6				
7				
8				

Does the refrigeration system utilize floating head pressure control?

Describe the industrial refrigeration system operating schedule at the facility.

Are there trends in the industrial system data? If so, what data points are trended (e.g., temperature, kW)?

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Are there any special requirements that would prevent changing the control strategy or usage of the industrial refrigeration system if recommended in the study?

Describe the industrial refrigeration system controls at the facility (cascading with no control, central control system, or manual control).

Terms and conditions apply.  
Actual savings will vary by customer's energy usage and rate.  
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The ComEd Energy Efficiency Program is funded in compliance with state law.