

# INDUSTRIAL SELF AUDIT TOOL



An energy self-assessment is a great way to improve efficiency and reduce operation costs at your facility. Unfortunately, not all businesses have the time or manpower to do so. Now, Focus on Energy can help you do the work by providing custom recommendations after you complete the following survey!

This self-assessment is intended to create a basic inventory and assessment of the major energy-consuming equipment in your facility. Focus on Energy can assist you in developing energy efficient practices or research the installation of new energy efficient equipment. This tool is designed to be quick and easy to use. Simply complete and submit this form to Focus and an energy advisor will review your self-assessment and provide you with an evaluation that will identify ways to save energy. On top of that, Focus will provide you with a list of cash incentives you might qualify for that will help pay for energy efficiency projects.

**Directions:**

1. Complete the self-assessment.
2. Return the completed assessment to Focus on Energy.
  - a. Fax to: 608.277.2949
  - b. Mail to: Focus on Energy; 5609 Medical Circle, Ste. 201, Madison, WI, 53719
  - c. Questions? Call 800.762.7077

For more information on how Focus on Energy can help your industrial facility, visit [focusonenergy.com/industrial](http://focusonenergy.com/industrial). If you have any questions, please contact Focus on Energy at 800.762.7077. To compare your facility's energy use with other similar businesses, use the U.S. Department of Energy's Quick Plant Energy Profiler at: <http://www1.eere.energy.gov/industry/bestpractices/software.html>.

**CUSTOMER LEGAL INFORMATION** (as shown on your income tax return)

Company Legal Name		Tax Identification Number—complete only one (must be 9 digits) FEIN #: _____ - _____ OR SS #: _____ - _____ - _____		
Legal Mailing Address		City	State	ZIP Code
Business Classification of Customer (Check ONE. Required for all businesses, including non-profits) <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietor/Individual <input type="checkbox"/> LLC <input type="checkbox"/> Other: _____			Owner Name (Corporations Excluded)	

**JOB SITE INFORMATION** (where equipment was installed or service performed)

Job Site Name		Project Contact Name		
Job Site Street Address (physical location)		Project Contact Email		
City	State <b>WI</b>	ZIP Code	Project Contact Telephone	
Electricity Provider at Job Site		Natural Gas Provider at Job Site	Building <input type="checkbox"/> Owned <input type="checkbox"/> Leased	

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## FACILITY USAGE

Annual Electric Bill (\$)	Fuel Types	Peak Demand (kW)	Annual Gas Bill (\$)
Electric Utility	Gas Utility	kWh Rate	Gas Rate/MMBtu
3-month Winter kWh Cost (\$) (Process related kWh cost)		3-month Summer Gas Cost (\$) (Process related gas cost)	
The sum of the kWh-related charges on your utility bill for Jan, February, and March.		The sum of the gas-related charges on your utility bill for June, July, & August.	

## FACILITY SPACE AND OPERATING HOURS

Area	Hours/Day	Days/Week	Weeks/Year	Square Footage	Ceiling Height
Manufacturing					
Office					
Warehouse					

## LIGHTING

Area	Lighting Type Choose: Incandescent lamp; Halogen lamp; Compact fluorescent; T5, T8, or T12 fluorescent; High performance T5, or T8; HID; low-pressure sodium; or LED.	Number of Fixtures	Lamps/Fixture	Watts/Lamp
Manufacturing				
Office				
Warehouse				

## COMPRESSED AIR

	Compressor Type Centrifugal, Axial flow, Reciprocating, Rotary screw, Rotary vane, Scroll, Diaphragm.	Control Type Start/stop, load/unload, inlet modulation, auto-dual, variable displacement, variable speed.	Age (Years)	Size (hp)
Compressor 1				
Compressor 2				
Compressor 3				

## MOTORS

	Use	Size (hp)	Age (Years)	Drive (Yes/No)	AC or DC	Efficiency
Motor 1						
Motor 2						
Motor 3						
Motor 4						
Motor 5						

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## HVAC: COMFORT HEATING

<b>Type of Heating</b> May include: electric, steam, hot water, infrared, rooftop forced air, or gas-fired make-up air (specify if direct or indirect fired).	<b>Quantity</b>	<b>Size (Btu/hr)</b>

## HVAC: BURNERS AND BOILERS

<b>Purpose</b> May include: Process Oven, Process Steam, Water heating.	<b>Quantity</b>	<b>Size (HP or Btu/hr)</b>	<b>Efficiency</b>

## HVAC: VENTILATION

<b>Purpose</b> May include: VOC's; CO2; Smoke; Particulates; Comfort; Spray Booth.	<b>Fan Size (HP)</b>	<b>Intake or Exhaust</b>

## HVAC: CHILLERS AND COMFORT COOLING

<b>Type of Cooling</b> Describe if process cooling or comfort cooling. Describe if cooling tower, HX, etc.	<b>Size (Tons)</b>	<b>Efficiency</b> Specify units, kW/ton, EER, or SEER

## HVAC: CHILLERS AND COMFORT COOLING

<b>Purpose</b>	<b>Quantity</b>	<b>Fuel Type</b>	<b>Size (HP or Btu/hr)</b>

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## BEST PRACTICES SURVEY

Please complete to the best of your knowledge. If unsure of an answer, it is best to circle NO. If your facility does not use the system in question, leave blank.

### YES NO

- Has there been a previous energy survey conducted at your facility? If yes, describe projects you have implemented and when the projects were completed in the Notes page.

### LIGHTING

#### YES NO

- Do you use incandescent lights only for low run time specialty applications?
- Do you evaluate the economics of four-foot T8 for all existing and new lighting applications?
- Is redundant safety lighting controlled so that it turns off when main lighting is on?
- Do you use 800 series lamps for T8 fluorescent lighting?
- Are L.E.D. lamps used in exit signs and signal lighting?
- Are there areas where the lighting is frequently left on without the space being used?
- Are occupancy sensors or other controls used?
- Do you shut off unnecessary lighting during a production process shutdown?
- When upgrading lighting, do you maximize task lighting and minimize ambient lighting?
- Is night lighting off during bright daylight hours?
- Have you evaluated dimming controls in areas that receive daylight during the day?
- Have you established lighting level standards for your facility?
- Do you regularly verify lighting levels with a light meter?
- Are facility personnel asked to identify opportunities for lighting improvements?

### COMPRESSED AIR

#### YES NO

- Is there metering that quantifies electrical use, compressed air pressure throughout the distribution system, and volume of compressed air produced?
- Is the system under control (After any system change, is system control re-established)?
- Are the compressors automatically sequenced?
- Do you have zero-loss condensate drains?
- Are compressed air demands highly fluctuating?
- Is the compressor constantly running or stopping and starting frequently?
- Do you recover waste heat from your compressors?
- Is a schedule established for identifying and correcting leaks and inappropriate uses?
- Are system improvements quantified and reported to management?
- Is system performance monitored to pursue continuous improvement?
- Is there a posted diagram of the compressed air system with all of its components and their capacities?

### MOTORS

#### YES NO

- Are loads on motors constant?
- Has variable speed control been evaluated for all loads that change?
- Do you have any pumps that are throttled or fans that are dampened?
- Are all motors sized so they are loaded at 50% to 80% of full-load horsepower?
- Have cogged belts been evaluated for all V-belt transmission systems?
- Do you know when to repair a failed motor verses buying a premium efficiency replacement motor?
- Are premium efficiency motors specified for all new equipment purchased?
- Does your company require a minimum motor efficiency when purchasing a new motor?
- Is motor lubrication and cooling fan airflow maintained on a schedule?

### HVAC

#### YES NO

- Are there programmable thermostats in each of the facility areas? If not, list which areas do not have a thermostat in the Notes page.
- Are ceiling fans in any of the facility areas? If so, list which areas have a ceiling fan in the Notes page.
- Is control automatic for any ventilation fans?
- Does your facility have spray booths? If so, is ventilation (circle) controlled or left on?
- For ventilation related to air quality, has the source of each contaminant been determined & minimized?
- Is building pressure negative?
- Is ventilation exhaust automatically shut down when it isn't needed?
- Is make-up air automatically controlled to keep neutral plant pressure?
- Is process exhaust located as close to the contaminant source as possible?
- Are contaminant intensive processes grouped together?
- Have you evaluated all exhaust streams for potential heat recovery? Including exhaust from dust and scrap collection systems? You may describe further in Notes.
- Is warm ceiling air de-stratified (for example w/ ceiling fans) during the winter season?
- Are dust and scrap collection systems properly sized to meet the demand?
- Is system performance monitored to pursue continuous improvement?

### STEAM SYSTEMS

#### YES NO

- If using a boiler, is the boiler pressure reduced to meet process requirements?
- If using a boiler, have an economizer? If yes, describe what it is used for in Notes.
- Is all condensate returned to the boiler?
- Are condensate lines insulated?
- Is steam system blowdown automatic?
- Is the boiler efficiency optimized?
- Are linkageless boiler controls used for combustion optimization?
- Can all steam related surfaces (e.g. pipes, boiler walls) be touched?
- Is all possible heat used prior to returning condensate?
- Is flash steam used as an energy source?
- Is there a formal steam system management in place?
- Do you have a scheduled steam trap maintenance program?
- Do you check regularly for steam leaks?
- Do all employees working with steam understand its properties?
- Is there a good description or diagram of the entire steam system?
- Is the distribution system actively and routinely maintained?

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## NOTES

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Please describe any additional equipment or information not captured in previous surveys. Attach additional notes pages as needed.