

# Commercial & Industrial Energy Efficiency Retrofits - Other Commercial Worksheet (Oregon)



## Steps to Submit Project

1. Fill out this worksheet to reflect the proposed equipment to be installed
2. Fill out the Non-Lighting Application - Oregon
3. Obtain manufacturer specifications for the proposed new equipment
4. Submit the above to [Retrofit@IdahoPower.com](mailto:Retrofit@IdahoPower.com)

## Notes

- Projects must meet the applicable specifications stated on the pages of this worksheet
- Projects with estimated incentive \$2,000 or greater should receive pre-approval from Idaho Power prior to project start

**Project Name:** \_\_\_\_\_

Replacing	Installing	Quantity (Units)	Incentive (Per Unit)	Total Incentive
<b>Laundry Machines</b> 014 Standard washer	ENERGY STAR <sup>®</sup> qualified washer	_____ washer	\$200.00	\$ _____
<b>Pool Cover</b> 017 No existing pool cover	Indoor/outdoor pool cover on electrically heated pool	_____ ft <sup>2</sup>	\$2.00	\$ _____
How is the pool heated? Check one:      electric resistance      heat pump				
<b>High Efficiency Battery Charger</b> 016 Traditional battery charger Single Phase      Three Phase	High Efficiency battery charger	_____ unit	\$200.00	\$ _____
<b>Engine Block Heater Controls</b> 02 Standard engine block heater without controls	Wall-mounted engine block heater control	_____ unit	\$100.00	\$ _____
03 Standard engine block heater without controls	Engine-mounted engine block heater control	_____ unit	\$150.00	\$ _____
<b>High Volume Low Speed Fan</b> 04 Standard 48" high speed fan	High volume low speed fan	_____ fan	\$2,000.00	\$ _____
<b>Compressed Air Equipment</b> 05 Standard Filter	Low pressure drop filter	_____ hp	\$10.00	\$ _____
06 Open tube with ball valve	No-loss condensate drain	_____ unit	\$200.00	\$ _____
07 Standard air nozzle	Efficient compressed air nozzle	_____ unit	\$80.00	\$ _____
010 No existing VFD	VFD on air compressor < 200 hp	_____ hp	\$200.00	\$ _____
<b>Motor Belts</b> (*Incentive capped at \$50/motor)				
011 Type A solid V-belt drive	Type AX notched V-belt drive	_____ hp	\$5.00*	\$ _____
012 Type B solid V-belt drive	Type BX notched V-belt drive	_____ hp	\$5.00*	\$ _____
<b>Dairy VFD</b> V4 No Existing VFD	VFD on milking vacuum pump	_____ hp	\$250.00	\$ _____
V5 No Existing VFD	VFD on dairy milk transfer pump	_____ VFD	\$1500.00	\$ _____

**Total**

**\$**

Checklists for Submission	
<b>Pre-Approval Checklist</b> Signed/Dated Non-Lighting Application (Oregon ) Other Commercial Worksheet (Oregon) Manufacturer Specification Sheets Harmonic Mitigation Specification Sheets (if applicable)	<b>Payment Checklist</b> Signed/Dated Non-Lighting Application (Oregon) Other Commercial Worksheet (Oregon) Invoices for Material & Labor

## Specifications for Other Commercial

### Laundry Machines

New [residential](#) or [coin-operated](#) commercial style washing machines used in a qualifying facility can earn an incentive for ENERGY STAR® labeled models that are used in conjunction with electric dryers. Large commercial or industrial hard-mounted laundry machines are not eligible for this incentive.

### Pool Cover

Pool cover covering the entire pool surface area installed on an electrically heated indoor or outdoor pool that has not had an existing pool cover for the prior 12 months. Pool cover must be designated for commercial swimming pools. Eligible pool cover types: multi-layered foam, solid track, or bubble. Mesh, solar disc, and liquid evaporation suppressant covers are not eligible. A storage reel for the pool cover is required.

### High Efficiency Battery Charger

This measure is for installing a high efficient battery charger in a warehouse to charge the electric forklifts used for transporting materials. Large storage warehouse will have a bank of forklifts that are used to load, unload and move materials throughout the facility and that these forklifts will remain on a charger when not in use. The old/standard charge is less efficient at charging the forklifts and use more energy when they are unloaded and in standby mode.

The baseline equipment is a traditional Ferro resonant (FR) or silicon-controlled rectifier (SCR) existing battery charger that operates in an industrial or warehouse setting to power forklifts. The new battery charger must meet the following efficiency requirements: Power conversion efficiency is greater than 89% and Maintenance power is less than 10 W.

### Engine Block Heater Controls

An incentive is available for adding wall-mounted or engine-mounted controls where none existed previously. Eligible equipment automatically cycles the heater on and off based on need, instead of running continuously. Wall-mounted heater controls have a 2-hour delay when plugged in after vehicle use and only turns on when the outside air drops below a certain threshold. Engine-mounted controls cycle the heater based on the engine temperature.

### Motor Belts

This incentive applies when replacing straight V-belt drives with notched V-belt drives in non-residential applications operating at least 2,616 hours per year. A notched V-belt uses the same sheaves as the standard V-belt. They reduce the bending force on the belt and will run cooler, and last longer, than a standard V-belt. The incentive is capped at \$50.00/motor for V-belts.

### High Volume Low Speed Fan

An incentive is available for the installation of a high volume low speed fan (HVLS) for air circulation in spaces with high ceilings that replace standard 48" high speed fans operating to provide thermal comfort. Eligible equipment will replace standard high speed fans with fewer high volume low speed fans\*. HVLS fans should operate only during business hours (either turned off automatically or by a manual switch) and only when needed for thermal comfort. Eligible equipment should follow AMCA 230-15 performance testing standards and meet the minimum energy efficiency (CFM/Watt) requirement for large diameter ceiling fans set by Electronic Code of Federal Regulations (e-CFR) Part 430 C Energy and Water Conservation Standards. The minimum energy efficiency is estimated with the following equation: Minimum energy efficiency (CFM/Watt) =  $0.91D^3 - 30.00$ . Where: D is the ceiling fan's blade span, in inches.

\*Reference the following chart for eligibility on replacement

HVLS Fan Size (inches)	Minimum number of standard 48" fans to be removed per each HVLS fan installed
72-119	2
120-167	3
168-215	4
216-263	5
264 or higher	6

### **Low Pressure Drop Filter**

The typical compressed air filter has a pressure drop that starts at 3 psi and ends at 5 psi. This incentive is for the installation of a low-pressure air filter with a pressure drop that starts at 1 psi and ends at 3 psi. The decrease in pressure drop means that the compressor will use less energy delivering the required compressed air psi.

### **No-loss Condensate Drain**

Compressed air causes the system to build up condensate that needs to be drained occasionally. Typical drains use high pressure to exhaust the condensate out, but they also exhaust some compressed air. The no-loss condensate drain replaces an open tube with ball valve to limit the amount of air waste. The no-loss condensate drain monitors the amount of condensate present and then exhausts only the condensate without wasting any compressed air.

### **Efficient Compressed Air Nozzle**

A compressed air nozzle is used to blow off parts or for drying. The high-efficiency air nozzle delivers the same performance as a standard air nozzle, while using less airflow.

### **Air Compressor VFD**

An incentive is available for the installation of a VFD installed on the air compressor and programmed to allow the compressor to vary in speed based on load demand. This measure applies to motors <200 hp.

### **Dairy Milking Vacuum Pump VFD**

Eligible equipment is a VFD installed on a dairy milking vacuum pump that has no VFD. Only primary pumps are eligible. Secondary or backup units are not eligible.

### **Dairy Milk Transfer Pump VFD**

Eligible equipment is a VFD installed on a dairy milk transfer pump that has no VFD. The milk transfer pump transports the collected milk into a storage unit (does not include milk processing). Since the flow of milk is not consistent, this pump will typically cycle off and on throughout the milking process to keep from running without milk present. A VFD on this pump will allow the pump to operate continually at a decreased speed based on the amount of milk being produced. Savings are realized from operating the pump continually at a low speed rather than cycling off and on at full speed. Eligible equipment are pumps that are directly used to transfer milk into storage. Only primary pumps are eligible. Secondary, or backup units are not eligible. Full replacement of an existing fixed speed pump with a new VFD driven pump is eligible for this incentive.

### **All VSD/VFD projects must meet the following criteria**

- Incentives apply to new equipment and new installations only. Replacement VSD/VFDs are not eligible.
- VSD/VFD must be installed in accordance with the *Institute for Electrical and Electronics Engineers* (IEEE) Standard 519 and *Idaho Power's* Rule K, Customer's Load and Operations Tariff.
- Throttling or bypass devices such as inlet vanes, dampers, three-way valves or throttling valves must be removed or permanently disabled to qualify for an incentive.
- The motor must operate at minimum 2,000 hours per year and be variably-loaded.
- Incentives are based on the drive horsepower or the motor horsepower that the drive controls, whichever is less.
- Manufacturer specification sheets for the VSD/VFD must accompany the Non-Lighting Application.
- Manufacturer specification sheets for harmonic mitigation, when required, must accompany the application.