

Commercial & Industrial Energy Efficiency Retrofit- Variable Speed/Frequency Drives Worksheet



Please complete this worksheet for the addition of variable speed drives (VSDs) or variable frequency drives (VFDs). **To qualify, the project must meet the applicable specifications as stated below.** When completed, attach this worksheet to your application form.

Project Name: _____

Note: Projects with an estimated incentive of \$1,000 or greater must receive preapproval from Idaho Power prior to project start. "

To calculate the incentive, take the lower of the drive horsepower or motor horsepower, multiply it by the quantity of units, and multiply it by incentive.

REPLACING	INSTALLING	DRIVE HP	MOTOR HP	QTY (Units)	INCENTIVE (Per HP)	TOTAL INCENTIVE
Variable Speed Drives on HVAC Fan/Pump Motors						
V1 Single speed HVAC system	Variable speed/frequency drive installed on chilled water pumps, condenser water pumps and cooling tower fans	_____ drive hp	_____ motor hp	_____ units	\$60.00	\$ _____
		_____ drive hp	_____ motor hp	_____ units	\$60.00	\$ _____
		_____ "drive hp"	_____ motor hp	_____ units	\$60.00	\$ _____
V2 Single speed HVAC system	Variable speed/frequency drive installed on supply, return, outside air and make-up air fans, hot water pumps	_____ drive hp	_____ motor hp	_____ units	\$100.00	\$ _____
		_____ drive hp	_____ motor hp	_____ units	\$100.00	\$ _____
		_____ drive hp	_____ motor hp	_____ units	\$100.00	\$ _____
V3 No existing VSD	Variable speed/frequency drive installed on potato or onion storage shed ventilation	_____ drive hp	_____ motor hp	_____ units	\$200.00	\$ _____
		_____ drive hp	_____ motor hp	_____ units	\$200.00	\$ _____
		_____ drive hp	_____ motor hp	_____ units	\$200.00	\$ _____
Total						\$ _____

Please provide the following:

Annual operating hours (per motor): _____

Idaho Power meter number or service agreement number serving the drive: _____

Location where the drive will be installed inside the facility: _____

Provide a detailed description of this project to include a description of existing system and existing control strategy, what type of motor equipment the proposed drive will control, and an explanation of the new control strategy and how it saves energy.

Specifications for VSD/VFD Measures

VSD/VFD 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 (this specific information must be addressed in the detailed description section on page one of this worksheet).
- Incentives are based on the drive horsepower or the motor horsepower that the drive controls, whichever is less.
- The motor must be a minimum of 5 horsepower, operate at minimum 2,000 hours per year, and be variably-loaded. The VSD/VFD installation must save energy on the equipment that it is installed on. Motors that are individually less than 5 hp are eligible provided they are controlled by a common VFD and the combined motor hp controlled per VFD is ≥ 5 hp.
- Manufacturer specification sheets for the VSD/VFD must accompany the Pre-Approval Application.
- Manufacturer specification sheets for harmonic mitigation, when required, must accompany the application.

Checklists for Submission	
<p>Pre-Approval Checklist</p> <p>Signed/Dated Non-Lighting Application</p> <p>VSD/VFD Worksheet (must be completely filled out)</p> <p>VSD/VFD Manufacturer Specification Sheets Harmonic Mitigation Specification Sheets (if applicable)</p>	<p>Payment Checklist</p> <p>Signed/Dated Non-Lighting Application</p> <p>VSD/VFD Worksheet (must be completely filled out)</p> <p>Invoices for Material & Labor</p>