



Agriculture Energy Savings Action Plan (AESAP) Rebate Catalog



AESAP Rebate Catalog 2024v1

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Program Overview



Savings for Agriculture Customers. The agricultural industry is extremely energy and water-intensive, and that's why Pacific Gas and Electric Company (PG&E) offers a variety of rebates, incentives, and financing options to help your operation reduce energy usage and costs. Upgrading ventilation, irrigation, and other critical systems with more energy-efficient options is one way to reduce your overhead, improve production, and preserve natural resources.

Rebates do not require pre-installation approval. Simply submit invoices with supporting documentation as outlined in the requirements and TRC will process and deliver the rebate to you. If you have an energy-savings measure not listed on the rebate list, **contact TRC** to see if it would qualify as a customized incentive.

Ag sectors served



Crop Production



Controlled Environment
Horticulture



Wineries & Breweries



Dairy & Livestock

Eligibility

Customer eligibility and qualifying terms and conditions are found on the AESAP Program Application which must be signed and submitted to receive rebate. To receive a rebate, customer must submit an application with itemized invoice for equipment purchased within 60 days from purchase date, installation date, or account establishment date (SAID activated) whichever is latest. Products purchased and installed in adherence to these terms and meet all individual measure requirements are eligible for a rebate, provided rebate funding is still available. Rebate offerings, qualifying products and rebate amounts may change without notice during the term. Eligible agriculture customers must already pay the Public Purpose Program (PPP) charge on their energy bill.

Ag Ventilation

Ag Ventilation Fan

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/Dairy	Process	Winery
SWPR001	A Efficient Ag Ventilation Fans 24-26 in	\$160/unit	●		●		
	B Efficient Ag Ventilation Fans 36 in	\$200/unit	●		●		
	C Efficient Ag Ventilation Fans 48 in	\$80/unit	●		●		
	D Efficient Ag Ventilation Fans 50-62 in	\$80/unit	●		●		
	E Efficient Ag Ventilation Fans 72 in	\$80/unit	●		●		
	F Efficient Ag Ventilation Fans 84 in	\$80/unit	●		●		

Requirements and Eligibility:

- Measure Application Types: New Construction (NC) and Normal Replacement (NR)
- Fan sizes 24" through 62" must have been tested by ANSI/AMCA 230-12 or later agricultural fan testing protocol and must meet the minimum required efficiencies.
- A lower number of 72" and 84" measure case fans are eligible to replace a larger number of existing fans, so long as measure eligibility regarding airflow (cfm) is followed.

Measure Application Type	Size	Minimum Allowable Efficiency (CFM/W)
New Construction and Normal Replacement	24-26 inch	13.18
	36 inch	16.62
	48 inch	19.27
	50-62 inch	20.75
	72 inch	>20.75
	84 inch	>20.75

Ag Ventilation Fan VFD

Measure Code	Measure Description	Rebate	Green	Irrigation	Livestock/	Process	Winery
			House		Dairy		
SWPR006	B	Ag Ventilation Fan VFD (1 to 5 hp)			●		

hp: horsepower

Requirements and Eligibility:

- Measure Application Type: Add on Equipment (AOE)
- This measure is applicable for all existing agriculture facilities used to house livestock, which includes Other Agricultural (AgOth) and Livestock Farms (ALF).
- The measure is applicable in California climate zones CZ06, CZ07, CZ08, CZ09, CZ10, CZ11, CZ12, CZ13, CZ14 and CZ15
- The existing fan shall meet the following requirements:
 1. The base case fan will either operate continuously or have ON/OFF controls
 2. Must not be for HVAC, exhaust, pressurization, or other process applications
 3. Individual fan motors are not to exceed 5 hp (Motor sizes outside these ranges are not typical and indicate another process)
 4. The fan must operate continuously or be manually operated with an ON/OFF control switch. Fan motors must not be two-speed or have an existing VSD
- The VFD must be used to vary the speed of a livestock barn ventilation fan automatically based on ambient conditions.
- The VSD must be installed as close to the motor as possible when applying VSD to a standard duty NEMA motor. Failure to do so may result in premature motor failure. Sufficient airflow must be maintained through the motor to prevent overheating
- The VSD is recommended to meet requirements as specified by IEEE Standard 519-2014
- The customer must have an existing electrically operated fixed speed fan installed on site or plans to install a new electrically operated fixed speed fan
- Customer must include documentation that identifies:
 1. quantity of VFDs installed
 2. type - controlling multiple fans up to 5-hp each in arrays with one VFD or one VFD for each fan
 3. horsepower rating of motor(s) and VFD(s)
 4. manufacturer make/model of each VFD installed
 5. Description of control strategy – min and max temperature (deg F) and speed (%)

Irrigation

Ag Well and Booster Pump VFD

Measure Code		Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWWP002	C (IR017)	Efficient VFD Ag Pumps Well, NC (25 hp to 300 hp)	\$40/ rated hp		●	●		●
	D (IR019)	Efficient VFD Ag Pumps Booster, NC (25 hp to 150 hp)			●	●		●
	A (IR036)	VFD on Ag Pumps Well, AOE (25 hp to 300 hp)			●	●		●
	B (IR037)	VFD on Ag Pumps Booster, AOE (25 hp to 150 hp)			●	●		●
SWWP005	A (IR020)	Tier 2 VFD Pump Well, NC (≤75 hp)	\$60/ rated hp		●	●		●
	B (IR021)	Tier 2 VFD Pump Well, NC (>75 to ≤600 hp)			●	●		●
	C (IR022)	Tier 2 VFD Pump Booster, NC (≤75 hp)			●	●		●
	D (IR023)	Tier 2 VFD Pump Booster, NC (>75 to ≤150 hp)			●	●		●
	I (IR028)	Tier 2 VFD on Ag Pump Well, AOE (≤75 hp)			●	●		●
	J (IR029)	Tier 2 VFD on Ag Pump Well, AOE (>75 to ≤600 hp)			●	●		●
	K (IR030)	Tier 2 VFD on Ag Pump Booster, AOE (≤75 hp)			●	●		●
	L (IR031)	Tier 2 VFD on Ag Pump Booster, AOE (>75 to ≤150 hp)			●	●		●
	E (IR024)	Tier 3 VFD Ag Pump Well, NC (≤75 hp)	\$80/ rated hp		●	●		●
	F (IR025)	Tier 3 VFD Ag Pump Well, NC (>75 to ≤600 hp)			●	●		●
	G (IR026)	Tier 3 VFD Ag Pump Booster, NC (≤75 hp)			●	●		●
	H (IR027)	Tier 3 VFD Ag Pump Booster, NC (>75 to ≤150 hp)			●	●		●
	M (IR032)	Tier 3 VFD on Ag Pump Well, AOE (≤75 hp)			●	●		●
	N (IR033)	Tier 3 VFD on Ag Pump Well, AOE (>75 to ≤600 hp)			●	●		●
	O (IR034)	Tier 3 VFD on Ag Pump Booster, AOE (≤75 hp)			●	●		●
	P (IR035)	Tier 3 VFD on Ag Pump Booster, AOE (>75 to ≤150 hp)			●	●		●

hp: horsepower, NC: New construction, AOE: Add on Equipment

(requirements on next page)

Ag Well and Booster Pump VFD (cont.)

Requirements and Eligibility:

- Measure Application Types: Add on Equipment (AOE) and New Construction (NC)
- Measures are applicable for all existing and new agriculture facilities in all PG&E climate zones
- Customer must include documentation that identifies:
 1. quantity of VFDs
 2. type – well and/or booster
 3. horsepower rating of motor(s) and VFD(s)
 4. area map showing physical location of pumps
 5. manufacturer make/model of each VFD installed
- VFD must be used to adjust operation of a pump to meet flow/pressure requirements and not be used simply as a soft starter or for cavitation control
- Pumping application must currently have the means to vary the pressure/flow (i.e., throttle valve, control valve, etc.)
- VFD must be installed on the pump motor with a minimum operation of 1,000 hours per year
- VFD must be installed on a pressurized irrigation system (including sprinklers, microsprinklers and drip, but excluding flood irrigation)
- Customer must have an existing electrically operated agricultural booster or well pump installed on site or plans to install a new agricultural booster or well pump
- Measure cannot be used in the following applications:
 1. a well pump used to fill a reservoir
 2. well pump discharging directly into a canal and/or
 3. a mixed flow pump (high volume, low head)
- To qualify for the higher "Tier 2" Mid-Tier or "Tier 3" Enhanced incentive measures, VFD system must comply with the specifications for PG&E Agricultural Pumping VFD Incentive Program, as prepared by California Polytechnic University, San Luis Obispo. VFD specification should be dated 8/15/2017 or after. Current version of VFD specifications, can be found here: itrc.org/VFD. Pump installer or pump company/manufacture will need to provide statement acknowledging that the ITRC specifications are being met to qualify
- For motors ≤ 75 hp, line side component of 3% AC line reactor or DC bus equivalent, or active front end is required. Vendor or manufacturer specifications must be provided showing requirement is met.
- For motors > 75 hp, VFD is required to meet power quality requirements as specified by Institute of Electrical and Electronics Engineers (IEEE) Standard 519-2014 found at standards.ieee.org/ieee/519/3710/. Recommended Practices and Requirements for Harmonic Control in Electric Power Systems. One of the following documentation options must be provided:
 1. Standard (e.g., 6-pulse) VFD with a Harmonic Filter Required Documentation: Harmonic filter manufacturer specifications reporting $\leq 5\%$ current THD or IEEE 519-2014 compliance.
 2. Low Harmonic VFD Product Required Documentation: VFD manufacturer specifications reporting $\leq 5\%$ current THD or IEEE 519-2014 compliance.
 3. VFD Certified to Comply with IEEE 519-2014 Required Documentation: Certification by a registered electrical engineer showing installation meets IEEE 519-2014 at the Point of Common Coupling

Water Pump Upgrade

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWWP004 -	R Clean water pump, PEI ≤ 0.41, variable speed, 1 ≤ hp ≤ 15 (NC or NR)	\$15/ rated hp	●	●	●	●	●
	Q Clean water pump, PEI ≤ 0.43, variable speed, 1 ≤ hp ≤ 15 (NC or NR)	\$15/ rated hp	●	●	●	●	●
	P Clean water pump, PEI ≤ 0.45, variable speed, 1 ≤ hp ≤ 15 (NC or NR)	\$15/ rated hp	●	●	●	●	●
	I Clean water pump, PEI ≤ 0.88, constant speed, 1 ≤ hp ≤ 15 (NC or NR)	\$10/ rated hp	●	●	●	●	●
	H Clean water pump, PEI ≤ 0.90, constant speed, 1 ≤ hp ≤ 15 (NC or NR)	\$10/ rated hp	●	●	●	●	●
	G Clean water pump, PEI ≤ 0.92, constant speed, 1 ≤ hp ≤ 15 (NC or NR)	\$10/ rated hp	●	●	●	●	●
	U Clean water pump, PEI ≤ 0.43, variable speed, 15 < hp ≤ 50 (NC or NR)	\$20/ rated hp	●	●	●	●	●
	T Clean water pump, PEI ≤ 0.45, variable speed, 15 < hp ≤ 50 (NC or NR)	\$12/ rated hp	●	●	●	●	●
	S Clean water pump, PEI ≤ 0.47, variable speed, 15 < hp ≤ 50 (NC or NR)	\$7/ rated hp	●	●	●	●	●
	L Clean water pump, PEI ≤ 0.88, constant speed, 15 < hp ≤ 50 (NC or NR)	\$20/ rated hp	●	●	●	●	●
	K Clean water pump, PEI ≤ 0.90, constant speed, 15 < hp ≤ 50 (NC or NR)	\$12/ rated hp	●	●	●	●	●
	J Clean water pump, PEI ≤ 0.92, constant speed, 15 < hp ≤ 50 (NC or NR)	\$7/ rated hp	●	●	●	●	●
	W Clean water pump, PEI ≤ 0.45, variable speed, 50 < hp ≤ 250 (NC or NR)	\$4.75/ rated hp	●	●	●	●	●
	V Clean water pump, PEI ≤ 0.47, variable speed, 50 < hp ≤ 250 (NC or NR)	\$2.25/ rated hp	●	●	●	●	●
	O Clean water pump, PEI ≤ 0.89, constant speed, 50 < hp ≤ 250 (NC or NR)	\$7.25/ rated hp	●	●	●	●	●
	N Clean water pump, PEI ≤ 0.91, constant speed, 50 < hp ≤ 250 (NC or NR)	\$4.50/ rated hp	●	●	●	●	●
	M Clean water pump, PEI ≤ 0.93, constant speed, 50 < hp ≤ 250 (NC or NR)	\$2/ rated hp	●	●	●	●	●

NC: New Construction, NR: Normal Replacement, PEI: Pump Energy Index

Requirements:

- Only clean water pumps that are intended for agricultural, commercial, and industrial sectors with a nominal horsepower rating of ≤250 and meet the pump energy index (PEI) requirements specified. In addition, the PEI should be confirmed on the Hydraulic Institute (HI) database (<https://er.pumps.org/ratings/search>).
- Any of the following clean water rotodynamic pump classes are eligible: End Suction Frame Mount (ESFM), End Suction Close Coupled (ESCC), In-line (IL), Radially Split multi-stage vertical in-line diffuser casing (RSV), Vertical Turbine Submersible (ST)
- This measure is applicable for the following agricultural, commercial, or industrial building types of any vintage in any PG&E climate zone. "Commercial" building type (Com) is NOT eligible for downstream delivery types. AgOth, Asm, Cnc, Cre, Dat, ECC, EPr, ERC, Ese, EUD, EUn, Fhc, Gro, Gst, HGR, Hsp, Htl, IndOth, Mtl, Nrs, OfL, OfS, RFF and RSD
- The following information must be provided:
 - Equipment manufacturer, model number, pump and motor hp, pump nominal speed, pump class type
 - Pump operating hours and description of possible seasonal fluctuations
 - Invoice, photo of installation and any available commissioning reports

Natural Gas

Boiler

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWPR007	A (PR105) Steam Feedwater Economizer 81.4% TE	\$1/kBtuh	●				●
	B (PR106) Steam Condensing Economizer 87.2% TE	\$2/kBtuh	●				●
SWWH008	A (H11) Hot Water 85% CE	\$2/kBtuh	●		●	●	●
	B (BW119) Hot Water 90% CE	\$4/kBtuh	●		●	●	●
	C (H15) Steam 83% CE	\$2/kBtuh	●			●	●

TE: Thermal Efficiency, CE: Combustion Efficiency

Requirements and Eligibility:

- Measures are allowed for any existing or new agricultural facility in any PG&E climate zone

Steam Boiler Economizer (SWPR007)

- Measure Application Types: Add on Equipment (AOE) and New Construction (NC)
- Measure is applicable to any Existing or New Construction agricultural steam boiler with an input rating $\geq 300,000$ Btu/hr and ≤ 20 million Btu/hr
- Boiler manufacturer, model, and spec sheet should be submitted for verification
- No boiler efficiency eligibility requirements for the measure, for both single-stage and dual-stage economizers
- For a dual-stage economizer:
 - the disposal of combustion condensate must meet local codes regarding sanitary drain or storm sewer
 - some applications may require a neutralizer for the acidic combustion condensate

Process Boiler Replacement (SWWH008)

- Measure Application Type: Normal Replacement (NR)
- Water and steam boilers must have an input rating $\leq 20,000$ kBtu/hr. The combustion efficiency must have a documented combustion efficiency of 85% or greater for water and 83% or greater for steam under full load conditions
- Measure is not applicable to boilers used for space heating, domestic hot water, pools, or spas, and is not eligible for domestic hot water or space heating
- Existing and replacement boilers must have the same input rating (measured in kBtu/hr)
- Measure is not eligible for New Construction installations

Greenhouse Heat Curtain

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWBE001	A (HV654) Double layer polyethylene with IR greenhouse with overhead gas furnace	\$0.50/ ft ² of building area	●				
	A (HV655) Double layer polyethylene with IR greenhouse with radiant heat furnace		●				
	B (HV656) Single layer polycarbonate greenhouse with overhead gas furnace		●				
	B (HV657) Single layer polycarbonate greenhouse with radiant heat furnace		●				

Requirements and Eligibility :

- Measure Application Types: Building Weatherization (BW) and New Construction (NC)
- This measure is applicable for agricultural or commercial greenhouse of any vintage for the primary purpose of the production of nursery products, horticultural specialties, or ornamental products.
- Must be a single-layer interior curtain installed for heat retention
- Must be installed in a gas-heated greenhouse facility
- The facility must be a greenhouse with the primary purpose of agricultural use.
- The heat curtain must be a new curtain installed where none previously existed or a new curtain that is replacing an existing curtain that is no longer functional.
- The heat curtain must be installed above the conditioned area where the gas heat source provides hot air to plant and seed species.
- The heat curtain must have a natural gas savings rating that meets or exceeds 40%.
- The heat curtain must have a warranty/product life of five years.
- The installation must allow the curtain to be automatically or manually moved into place.
- The square footage of the new heat curtain cannot exceed the square footage of the greenhouse floor. Additionally, any overhang and overlap of curtain material cannot be included in the square footage calculation
- The manufacturer's specification sheet and minimum five-year warranty proof must be submitted with the application.
- Application must include a digital image or drawing of the area of the greenhouse where the new curtain is installed.

Greenhouse Infrared Film

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWBE002	A (HV658) Double layer polyethylene greenhouse with overhead gas furnace, NC	\$0.02/ft ²	●				
	A (HV658) Double layer polyethylene greenhouse with overhead gas furnace, AOE	\$0.04/ft ²	●				
	A (HV659) Double layer polyethylene greenhouse with radiant heat furnace, NC	\$0.02/ft ²	●				
	A (HV659) Double layer polyethylene greenhouse with radiant heat furnace, AOE	\$0.04/ft ²	●				

NC= New construction, AOE = Add on Equipment

Requirements and Eligibility:

- Measure Application Types: Building Weatherization (BW) and New Construction (NC)
- This measure is applicable for agricultural or commercial greenhouse of any vintage for the primary purpose of the production of nursery products, horticultural specialties, or ornamental products.
- The IR film must be installed in a gas-heated greenhouse facility.
- The heating equipment type (building HVAC) must be specified in the implementation of the measure.
- The facility must be a greenhouse with the primary purpose of agricultural use.
- The film must be infrared, anti-condensate, polyethylene plastic with a minimum thickness of six thousandths of an inch (6 Mil).
- The IR film shall not be installed on the walls of the greenhouse.
- The manufacturer's specification sheet must be submitted with the application

Pipe Insulation

Pipe diameter is less than or equal to 1 inch

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWWH017	(PR051) 1 inch insulation layer, ≤ 1 inch pipe, steam ≤ 15 psig, outdoor	\$4.00/linear foot	●		●	●	●
	(PR052) 1 inch insulation layer, ≤ 1 inch pipe, steam > 15 psig, outdoor	\$4.00/linear foot	●		●	●	●
	(PR053) 1 inch insulation layer, ≤ 1 inch pipe, hot water, outdoor	\$4.00/linear foot	●		●	●	●
	(PR060) 1 inch insulation layer, ≤ 1 inch pipe, steam ≤ 15 psig, indoor	\$4.00/linear foot	●		●	●	●
	(PR061) 1 inch insulation layer, ≤ 1 inch pipe, steam > 15 psig, indoor	\$4.00/linear foot	●		●	●	●
	(PR062) 1 inch insulation layer, ≤ 1 inch pipe, hot water, indoor	\$4.00/linear foot	●		●	●	●
	(PR069) Fitting insulation, ≤ 1 inch pipe, steam ≤ 15 psig, indoor	\$4.00/fitting	●		●	●	●
	(PR070) Fitting insulation, ≤ 1 inch pipe, steam > 15 psig, indoor	\$4.00/fitting	●		●	●	●
	(PR071) Fitting insulation, ≤ 1 inch pipe, hot water, indoor	\$4.00/fitting	●		●	●	●
	(PR078) Fitting insulation, ≤ 1 inch, steam ≤ 15 psig, outdoor	\$4.00/fitting	●		●	●	●
	(PR079) Fitting insulation, ≤ 1 inch, steam > 15 psig, outdoor	\$4.00/fitting	●		●	●	●
	(PR080) Fitting insulation, ≤ 1 inch, hot water, outdoor	\$4.00/fitting	●		●	●	●

Pipe diameter larger than 1 inch and less than or equal to 4 inches

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWWH017	(PR057) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, steam ≤ 15 psig, outdoor	\$4.00/linear foot	●		●	●	●
	(PR058) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, steam > 15 psig, outdoor	\$4.00/linear foot	●		●	●	●
	(PR059) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, hot water, outdoor	\$4.00/linear foot	●		●	●	●
	(PR066) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, steam ≤ 15 psig, indoor	\$4.00/linear foot	●		●	●	●
	(PR067) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, steam > 15 psig, indoor	\$4.00/linear foot	●		●	●	●
	(PR068) 1 inch insulation layer, 1 inch < pipe ≤ 4 inch, hot water, indoor	\$4.00/linear foot	●		●	●	●
	(PR075) Fitting insulation, 1 inch < pipe ≤ 4 inch, steam ≤ 15 psig, indoor	\$4.00/fitting	●		●	●	●
	(PR076) Fitting insulation, 1 inch < pipe ≤ 4 inch, > 15 psig steam, indoor	\$4.00/fitting	●		●	●	●
	(PR077) Fitting insulation, 1 inch < pipe ≤ 4 inch, hot water, indoor	\$4.00/fitting	●		●	●	●
	(PR084) Fitting insulation, 1 inch < pipe ≤ 4 inch, ≤ 15 psig steam, outdoor	\$4.00/fitting	●		●	●	●
	(PR085) Fitting insulation, 1 inch < pipe ≤ 4 inch, > 15 psig steam, outdoor	\$4.00/fitting	●		●	●	●
	(PR086) Fitting insulation, 1 inch < pipe ≤ 4 inch, hot water, outdoor	\$4.00/fitting	●		●	●	●

(requirements on next page)

Pipe diameter is greater than 4 inches

Measure Code			Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWWH017	(PR054)		1 inch insulation layer, > 4 inch pipe, ≤ 15 psig steam, outdoor	\$4.00/ linear foot	●		●	●	●
	(PR055)		1 inch insulation layer, > 4 inch pipe, > 15 psig steam, outdoor	\$4.00/ linear foot	●		●	●	●
	(PR056)		1 inch insulation layer, > 4 inch pipe, hot water, outdoor	\$4.00/ linear foot	●		●	●	●
	(PR063)		1 inch insulation layer, > 4 inch pipe, ≤ 15 psig steam, indoor	\$4.00/ fitting	●		●	●	●
	(PR064)		1 inch insulation layer, > 4 inch pipe, > 15 psig steam, indoor	\$4.00/ linear foot	●		●	●	●
	(PR065)		1 inch insulation layer, > 4 inch pipe, hot water, indoor	\$4.00/ linear foot	●		●	●	●
	(PR072)		Fitting insulation, > 4 inch pipe, ≤ 15 psig steam, indoor	\$4.00/ fitting	●		●	●	●
	(PR073)		Fitting insulation, > 4 inch pipe, > 15 psig steam, indoor	\$4.00/ fitting	●		●	●	●
	(PR074)		Fitting insulation, > 4 inch pipe, hot water, indoor	\$4.00/ fitting	●		●	●	●
	(PR081)		Fitting insulation, > 4 inch pipe, ≤ 15 psig steam, outdoor	\$4.00/ fitting	●		●	●	●
	(PR082)		Fitting insulation, > 4 inch pipe, > 15 psig steam, outdoor	\$4.00/ fitting	●		●	●	●
	(PR083)		Fitting insulation, > 4 inch pipe, hot water, outdoor	\$4.00/ fitting	●		●	●	●

Requirements and Eligibility:

- Measure Application Type: Add on Equipment (AOE)
- These measures are applicable to any small, large commercial and industrial pipe insulation retrofit (i.e., non-new construction) application. They cannot be used for residential purposes.
- Minimum-qualifying pipe diameter is 0.5 inch.
- Pipe must transfer fluid directly from gas-fired equipment, and insulation materials/accessories must be installed according to manufacturer's instructions.
- Application must include the manufacturer's name, insulation material type and material K-value rating.
- Acceptable types of insulation for hot water pipes include: elastomeric foam rubber, polyethylene foam, UV-resistant polyethylene foam and rigid polyurethane foam.
- Acceptable types of insulation for steam pipes include silicone foam rubber, melamine foam, rigid urethane-based foam, cellular glass, rigid fiberglass and rigid mineral wool.
- Replacement of damaged or existing insulation is not eligible for a rebate.
- California Building Standards Code (Title 24), Section 123, establishes requirements for pipe insulation in the design and installation of space-conditioning and service water heating systems and equipment. Any pipe requiring insulation according to these standards does not qualify for a rebate. Details are available at energy.ca.gov/title24.
- Pipe insulation for exposed steam and hot-water pipes within 7 feet of the floor that are not otherwise guarded in order to prevent contact does not qualify for rebate.

Processing

Dust Collection Fan VFD

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWPR005	A (PR088)	VFD on 10 hp motor				●	
	B (PR089)	VFD on 15 hp motor				●	
	C (PR090)	VFD on 20 hp motor				●	
	D (PR091)	VFD on 25 hp motor				●	
	E (PR092)	VFD on 30 hp motor				●	
	F (PR093)	VFD on 40 hp motor				●	
	G (PR094)	VFD on 50 hp motor				●	
	H (PR100)	VFD on 60 hp motor				●	
	I (PR101)	VFD on 75 hp motor				●	
	J (PR102)	VFD on 100 hp motor				●	
	K (PR103)	VFD on 125 hp motor				●	
	L (PR104)	VFD on 150 hp motor				●	

hp: horsepower

Requirements and Eligibility:

- Measure Application Type: Add on Equipment (AOE)
- Applicable to customers in the following NAICS Code: 111000 to 112990, 115114, 312120, 312130 and 312140 in all PG&E climate zones – for 60 hp to 150 hp NAICS Code: 111000 to 112990
- Customer must have an existing electrically operated fixed-speed fan installed on site or plans to install a new electrically operated fixed-speed fan
- Existing baghouse, fan, and motor must be in proper operating condition and compatible with a VFD
- Installed VFD must be controlled based on static pressure, airflow rate (cfm), or velocity at the lowest required rate to keep particulates suspended in the air stream
- Fan/blower must not be a designed high-pressure blower. High pressure blowers have designed capacities of less than 150 cfm per rated horsepower (Applicable only to fan motors larger than 50 hp.)
- Measure cannot be used for the following applications:
 1. HVAC fan
 2. individual fan motor rated less than 10hp or higher than 150hp
 3. two-speed fan motor
 4. fan motor with an existing VFD or failed VFD
- VFD is recommended, but not required, to meet requirements as specified by IEEE Standard 519-2014

Refrigeration

Glycol Pump VFD

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWPR002	A (MA4) Glycol Pump VFD Winery 3 hp	\$1,000/unit					●
	B (MA5) Glycol Pump VFD Winery 5 hp	\$1,500/unit					●
	C (MA6) Glycol Pump VFD Winery 7.5 hp	\$1,750/unit					●
	D (MA7) Glycol Pump VFD Winery 10 hp	\$2,000/unit					●
	E (MA8) Glycol Pump VFD Winery 15 hp	\$3,000/unit					●
	F (MA9) Glycol Pump VFD Winery 20 hp	\$4,000/unit					●
	G (MAA) Glycol Pump VFD Winery 25 hp	\$5,000/unit					●

hp: horsepower

Requirements and Eligibility:

- Measure Application Type: Add on Equipment (AOE)
- Measure is only applicable to the winery industry for process end-use applications in all PG&E climate zones
- Application of this measure is for the addition of a VFD on an existing glycol pump motor that operates at constant speed. Chilled fluid, other than glycol, can be considered only if the unit energy savings (UES) is equal to or exceeds the UES of this measure. Contact TRC for non-glycol fluid applications prior to purchasing equipment to confirm eligibility.
- VFD must have automated controls based on pressure feedback, fluid temperature feedback, and/or flow rate feedback.
- Customer must provide documentation that the VFD is not installed on a back-up pump or redundant pump.

Floating Head Pressure Controls, Multiplex

Measure Code	Measure Description	Rebate	Green House	Irrigation	Livestock/ Dairy	Process	Winery
SWCR007	A (R116) Control SCT to wetbulb +17 deg F TD, 70 deg F min, backflood setpoint of 68 deg F (AOE)	\$200/ Cap-Tons				●	●
	B (R123) Control SCT to wetbulb +17 deg F TD, 70 deg F min, backflood setpoint of 68 deg F with VFD fan control (AOE)	\$200/ Cap-Tons				●	●
	B (RF064) Control SCT to ambient +12 deg F TD, 70 deg F min, backflood setpoint of 68 deg F (AOE)	\$150/ Cap-Tons				●	●
	A (RF065) Control SCT to ambient +12 deg F TD, 70 deg F min, backflood setpoint of 68 deg F with VFD fan control (AOE)	\$250/ Cap-Tons				●	●

SCT: Saturated Condensing Temperature, AOE: Add on Equipment

Requirements and Eligibility:

- Measure Application Type: Add on Equipment (AOE)
- Floating head pressure control for commercial air-cooled multiplex refrigeration systems:
 1. Control SCT to ambient +12 °F TD, 70 °F min, backflood setpoint of 68 °F
 2. Control SCT to ambient +12 °F TD, 70 °F min, backflood setpoint of 68 °F with variable-speed fan control
- Floating head pressure control for commercial evaporative-cooled multiplex refrigeration systems:
 1. Control SCT to wetbulb +17 °F TD, 70 °F min, backflood setpoint of 68 °F
 2. Control SCT to wetbulb +17 °F TD, 70 °F min, backflood setpoint of 68 °F with variable-speed fan control
- For reducing or floating head pressure to lower SCTs, the equipment must meet the following requirements:
 1. Add controls to float head pressure down to a lower pressure when conditions permit (i.e., changes control from fixed set point to floating set point).
 2. Apply only to refrigeration systems having multiplex compressor systems with existing control of SCT at a fixed setpoint.
 3. The new SCT setpoint must be ambient following by controlling condenser fans with variable-speed drives or by staging condenser fans.
- This measure is applicable to all climate zones with any existing Non-Residential building type in commercial and industrial sector, and the following listed vintage categories: Prior to 1978 (represented by typical year "1975"), 1978 through 1992 ("1985"), 1993 through 2001 ("1996"), 2002 through 2005 ("2003"), 2006 through 2009 ("2007"), 2010 through 2013 ("2011")
- Products cannot be used in conjunction with measures that already incorporate floating head pressure controls. In addition, the following are ineligible: a) Projects that only reprogram a controller; new hardware must be installed b) New construction installations c) Any improvements which results in increased system energy use.
- Additionally, the calculation of the design cooling load (tons) is to be based on connected display cases, walk-in coolers and freezers, cooled storage, and prep areas only. Sub-cooler loads and air conditioning loads are ineligible for consideration.
- Building vintage and refrigeration multiplex system vintage after 2013. Customer must provide vintage of the building and the refrigeration multiplex system.

Additional AESAP Program Offerings



The savings don't stop at rebates. If you have an energy-saving upgrade in mind but do not see it on this list, chances are it may qualify for the Custom Incentives Program.

All custom incentives require pre-approval prior to equipment purchase and installation and projects will be subject to an engineering review to ensure that measures satisfy program requirements. No-cost engineering assistance is available to all customers and Trade Allies to quantify savings and incentives upon request.



Custom Projects

Have a special project in mind? Our team of experts can help you identify energy-saving opportunities and incentives. Custom opportunities receive cash incentives based on the amount of energy your project saves. In addition to retrofits, customized incentives are available for retro-commissioning activities such as setpoint changes, new load added equipment, as well as modifying existing processes to improve overall kWh or therm per unit produced.



Finance Options

There are many cost-effective ways to finance your projects. We can help you find a way that works best for your business:

On-Bill Financing – 0% interest loans up to \$4MM where the energy savings pays off the loan on your bill.

GoGreen Financing – The Small Business Financing (SBF) program offers financing with attractive terms for energy-efficiency improvements to businesses.

CONTACT US TODAY TO GET STARTED

1-833-987-SAVE | connect@AgEnergySavings.com

www.AgEnergySavings.com

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material ID-C22657-0124