

Agricultural (Farm/Dairy Equipment)

Pacific Power provides incentives for many types of energy efficient technologies. Please read the following sections carefully to ensure that you follow the appropriate steps for securing your incentive.

Incentives for additional measures may be available. For more information about the FinAnswer Express program, eligibility requirements, incentive levels or other general inquiries, contact your local equipment dealer or Pacific Power. You can visit the program website at pacificpower.net/wattsmart and submit your inquiry online, or you can call our **energy services hotline** at **1-800-222-4335**.

BLOCK HEATER TIMERS

Measure Description: Block heaters are electrical heaters designed to keep tractors and other diesel engines warm to them protect from freeze damage and ease starting in cold weather. A block heater is only required for a few hours to sufficiently warm the engine block, but are typically operated overnight. A block heater timer saves energy by reducing the number of hours that the heater runs.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. Timer must be a UL-listed device and rated for a minimum of 15 amps continuous duty.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice.
3. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
4. Documentation of the equipment's eligibility, which may include the product specification sheet, timer package printout, or photos showing the UL and amperage ratings.
5. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
AGBLHT	Block Heater Timers	\$10 / unit

AUTOMATIC MILKER TAKEOFFS

Measure Description: Automatic milker takeoffs are devices used with automatic milking machines that detach the apparatus without human interaction when flow drops below a pre-set level, which reduces unnecessary vacuum pump usage.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. Equipment must be able to sense milk flow and remove milker when flow reaches a pre-set level.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation date.
3. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
AGATMT	Automatic Milker Takeoffs	\$235 / unit

VARIABLE FREQUENCY DRIVES (VFDS) FOR DAIRY VACUUM PUMPS

Measure Description: Dairy vacuum pumps are required to maintain a constant vacuum supply for proper operation of automatic milkers. A variable frequency drive (VFD) installed on a vacuum pump saves energy by measuring the vacuum load on the system and varying the power accordingly.

Applicability: Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. The equipment must vary the motor speed in accordance with the air flow needs of the vacuum system. Incentives are available for retrofit applications only.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation/upgrade date.
3. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
AGVFDD	VFD for Dairy Vacuum Pumps	\$165 / horsepower

CIRCULATING FANS

Measure Description: Circulating fans are used to move the ventilation air through farm buildings efficiently to ensure adequate temperature control and ventilation. Fans that meet performance standards provide the required ventilation efficiently and use less energy than fans that do not meet these performance standards.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. Incentives are available for equipment meeting or exceeding the efficiency requirements listed in the table below.

Table 1. Circulating Fan Minimum Efficiency Requirements

Equipment Type	Equipment Category	Minimum Efficiency Requirements
Circulating Fans (See Note 1)	12-23" Diameter	Fans must achieve an efficiency level of 11 cfm/W
	24-35" Diameter	Fans must achieve an efficiency level of 18 cfm/W
	36-47" Diameter	Fans must achieve an efficiency level of 18 cfm/W
	≥ 48" Diameter	Fans must achieve an efficiency level of 25 cfm/W

1. Fan performance must be rated by an independent testing body in accordance with the appropriate ANSI/AMCS standards.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation date.
3. Documented fan performance rating from independent testing body.
4. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
5. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Equipment Category</u>	<u>Incentive</u>
AGCFSD	12-23" Diameter	\$25 / fan
AGCFMD	24-35" Diameter	\$35 / fan
AGCFLD	36-47" Diameter	\$50 / fan
AGCFXL	≥ 48" Diameter	\$75 / fan

ANSI = American National Standards Institute
 AMCS = Air Movement & Control Association International, Inc.
 CFM = Cubic Feet per Minute
 W = Watt

HIGH-EFFICIENCY VENTILATIONS SYSTEMS

Measure Description: Ventilation systems are used to ensure adequate temperature control and ventilation for livestock by bringing in or exhausting air to the facility. Fans that meet performance standards provide the required ventilation efficiently and use less energy than fans that do not meet these performance standards.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. Incentives are available for equipment meeting or exceeding the efficiency requirements listed in the table below.

Table 2. Ventilation Fan Minimum Efficiency Requirements

Equipment Type	Equipment Category	Minimum Efficiency Requirements
High-efficiency Ventilation Systems (See Note 1)	12-23" Diameter	Fans must achieve an efficiency level of 11 cfm/W
	24-35" Diameter	Fans must achieve an efficiency level of 13 cfm/W
	36-47" Diameter	Fans must achieve an efficiency level of 17 cfm/W
	≥ 48" Diameter	Fans must achieve an efficiency level of 19.5 cfm/W

1. Fan performance must be rated by an independent testing body in accordance with the appropriate ANSI/AMCS standards.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation date.
3. Documented fan performance rating from independent testing body.
4. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
5. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Equipment Category</u>	<u>Incentive</u>
AGVSSD	12-23" Diameter	\$45 / fan
AGVSMD	24-35" Diameter	\$75 / fan
AGVSLD	36-47" Diameter	\$125 / fan
AGVSXL	≥ 48" Diameter	\$150 / fan

ANSI = American National Standards Institute
 AMCS = Air Movement & Control Association International, Inc.
 CFM = Cubic Feet per Minute
 W = Watt

PROGRAMMABLE VENTILATION CONTROLLER

Measure Description: Programmable ventilation controllers vary the speed of ventilation fans to meet the immediate needs of the facility. Ventilation controllers ensure there is proper ventilation and temperature control while minimizing the run time of the ventilation fans.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed, and meet all other program terms and conditions. The equipment must control ventilation fans based on temperature or environmental settings.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation/upgrade date.
3. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
4. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
AGPRVC	Programmable Ventilation Controller	\$20 / fan controlled

HEAT RECLAIMERS (ELECTRIC WATER HEATING)

Measure Description: Hot water is used to clean milk pipes and sanitize work areas. A heat reclaimer takes waste heat from the milk refrigeration process and uses it to preheat water to reduce the heating load on the primary water heater.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: Equipment must be purchased and installed in a facility with electric water heating, and meet all other program terms and conditions. Heat reclaimer must use waste heat from the milk refrigeration compressor to heat water.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation/upgrade date.
3. Milk refrigeration system and efficiency information.
4. Itemized list of quantity, description, manufacturer, model number and a description of the installation/upgrade or other identifying information.
5. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No.

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive</u>
AGHERC	Heat Reclaimers	\$220 / condenser kW

MILK PRE-COOLERS

Measure Description: Milk coming from an automatic milker must be cooled to help preserve it and prepare it for processing and shipment. A milk pre-cooler is a heat exchanger that uses well water to begin cooling the milk before it enters the bulk cooling tank. Pre-cooling lowers the load on the refrigeration system and is more efficient; the additional pump energy is more than offset by the reduction in compressor energy consumption.

Applicability: New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application.

Equipment Eligibility: To calculate incentives for milk pre-coolers, please contact your equipment vendor or Pacific Power prior to purchasing equipment. Retrofit installations replacing existing pre-coolers are not eligible for incentives. Equipment must be purchased and installed, and meet all other program terms and conditions. The equipment must cool milk with well water before it reaches the bulk cooling tank. Milk pre-cooler energy and demand savings subject to approval by Pacific Power.

Items to submit with application:

1. Retailer/Contractor name, address and phone number.
2. Dated sales receipt/invoice with installation/upgrade date.
3. Itemized list of quantity, description, manufacturer, model number and a description of installation or other identifying information.
4. A completed copy of Table 3.
5. A current copy of the Pacific Power utility bill for the address where the item(s) are installed.

Prequalification Required? No. Prequalification is recommended, but not required to receive incentives. Contact your vendor or Pacific Power for more information.

Note: Pacific Power has a calculation software tool available for vendors participating in our Energy Efficiency Alliance (EEA) to calculate project-specific energy savings, project economics, and eligible incentives for milk pre-cooler projects. Visit our website at pacificpower.net/wattsmart for a current list of participating vendors.

Table 3. Milk Pre-Cooler Information Table

Customer	Company Name		
	Contact Name		
	Contact Phone Number		
	Facility Address		
	Facility City, State, Zip		
	Pacific Power Account Number		
	Pacific Power Rate Schedule		
Project Information	Replacing Existing Pre-Cooler (circle one)	YES	NO
	Annual Milk Production (Gallons/year)		
	Average Daily Milking Hours		
	Project Cost (\$)		
	Weeks Operated per year		
	Open Major Holidays (circle one)	YES	NO

<u>Equipment Code</u>	<u>Measure Description</u>	<u>Incentive*</u>
AGMLPC	Milk Pre-Coolers	\$0.12/kWh + \$50/kW.

*To calculate the project savings and incentives, complete Table 3 and submit a copy with your application via e-mail to: ca.farmdairy@pacificpower.net. Milk pre-cooler energy and demand savings subject to approval by Pacific Power.