

## 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.

For more information about the FinAnswer® Express program, eligibility requirements, incentive levels, or other general inquiries, contact your local equipment dealer or Pacific Power. Visit the program website at [pacificpower.net/wattsmart](http://pacificpower.net/wattsmart) to submit an inquiry online or call our **energy services hotline** at **1-800-222-4335**. Incentives for additional measures beyond those shown here may be available through the Energy FinAnswer® program.

### **AUTOMATIC MILKER TAKEOFFS**

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

**Applicability:** Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application where automatic takeoffs have not previously been installed. Replacement of existing automatic milker takeoffs are not eligible for the FinAnswer® Express incentive shown here, but may qualify for a custom incentive. Documentation describing the existing equipment and its functionality must be provided. Equipment must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** The vacuum pump serving the affected milking units must be equipped with a variable frequency drive to slow the vacuum pump's speed when demand for vacuum is reduced. Equipment must be able to sense milk flow and remove milker when flow reaches a pre-set level.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No. (Note, however, that custom incentives do require prequalification and customer signs an incentive agreement before signing purchase orders for new equipment.)

Equipment code	Measure description	Incentive
AGATMT	Automatic milker takeoff	\$235 / unit

## BLOCK HEATER TIMERS

**Measure description:** Block heaters are electric heaters designed to keep tractor and other diesel engines warm to protect them from freeze damage and ease starting in cold weather. A block heater is typically only required for a portion of the day or night to sufficiently warm the engine block if cycled on and off, but is typically operated continuously overnight. Block heater timers save energy by reducing the overall runtime of the heater.

**Applicability:** New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. Equipment must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** Timer must be a UL-listed device and rated for a minimum of 15 amps continuous duty.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.
3. Documentation of the equipment's eligibility, which may include the product specification sheet, copy of text on the timer package, or photos showing the UL and amperage ratings.

**Prequalification required?** No.

Equipment code	Measure description	Incentive
AGBLHT	Block heater timer	\$10 / unit

**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 must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** Equipment must be purchased and installed in a facility with electric water heating. Heat reclaimer must use waste heat from the milk refrigeration system to heat water.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Size and performance information about the milk refrigeration and water heating systems.
3. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No.

Equipment code	Measure description	Incentive
AGHERC	Heat reclaimer	\$220 / condensing unit kW

## MILK PRE-COOLERS

**Measure description:** Milk coming from the milking parlor must be rapidly cooled to prevent spoilage. 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 saves energy. The additional pump energy (if any) 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 must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** To calculate incentives for milk pre-coolers, please contact your equipment vendor or Pacific Power prior to purchasing equipment. The equipment must cool milk with well water before it reaches the bulk cooling tank. Milk pre-cooler energy and demand savings figures are subject to approval by Pacific Power.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.
3. A copy of the output from the pre-cooler savings calculator (provided by Pacific Power).

**Prequalification required?** No. Prequalification is recommended, but not required to receive incentives. A calculator tool and technical help are available for determining project savings and the incentive amount. Energy and demand savings figures are subject to approval by Pacific Power. Please contact Pacific Power for assistance.

Equipment code	Measure description	Incentive
AGMLPC	Milk pre-cooler	\$0.12/kWh of annual energy savings + \$50/kW of average monthly demand savings

**PROGRAMMABLE VENTILATION CONTROLLER**

**Measure description:** Programmable ventilation controllers vary the speed of ventilation fans to match the immediate needs of the facility. Ventilation controllers provide proper ventilation and temperature control while minimizing the runtime of ventilation fans.

**Applicability:** New construction and retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. Equipment must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** The equipment must control ventilation fans based on temperature or other applicable factors such as humidity, odor concentration, etc.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No.

Equipment code	Measure description	Incentive
AGPRVC	Programmable ventilation controller	\$20 / fan controlled

**VARIABLE FREQUENCY DRIVES (VFDS) FOR DAIRY VACUUM PUMPS (retrofit only)**

**Measure description:** Dairy vacuum pumps maintain the vacuum supply for operation of automatic milkers. In a baseline system the vacuum level is controlled by a moduator which allows air into the system to maintain constant vacuum as demand for vacuum varies during the milking process. A variable frequency drive (VFD) installed on the vacuum pump saves energy by continuously measuring the vacuum level in the system and controlling the pump speed to maintain proper vacuum.

**Applicability:** Retrofit installations that meet eligibility requirements may qualify for an incentive via a post-purchase application. Equipment must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** The equipment must vary the motor speed in accordance with the flow needs of the vacuum system. Incentives are available for retrofit applications only for systems without an existing VFD.

**Items to submit with application:**

1. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No.

Equipment code	Measure description	Incentive
AGVFDD	VFD for dairy vacuum pump	\$165 / horsepower

## CIRCULATING FANS

**Measure description:** Circulating fans are used to move ventilation air through farm buildings to manage temperature and provide ventilation. Fans that meet particular 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 must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** Incentives are available for equipment meeting or exceeding the efficiency requirements listed in the table below.

**Circulating Fan Minimum Efficiency Requirements**

Equipment type	Equipment category	Minimum efficiency requirements
Circulating Fan (See Note 1)	12-23" Diameter	Fans must achieve an efficiency level of <b>11</b> cfm/watt
	24-35" Diameter	Fans must achieve an efficiency level of <b>18</b> cfm/watt
	36-47" Diameter	Fans must achieve an efficiency level of <b>18</b> cfm/watt
	• 48" Diameter	Fans must achieve an efficiency level of <b>25</b> cfm/watt

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. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Documented fan performance rating from independent testing body.
3. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No.

Equipment code	Equipment category	Incentive
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 manage temperature and provide ventilation for livestock by bringing in or exhausting air to the facility. Fans that meet particular 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 must be purchased and installed and meet all program terms and conditions.

**Equipment eligibility:** Incentives are available for equipment meeting or exceeding the efficiency requirements listed in the table below.

**Ventilation Fan Minimum Efficiency Requirements**

Equipment type	Equipment category	Minimum efficiency requirements
High-efficiency ventilation system (See Note 1)	12-23" Diameter	Fans must achieve an efficiency level of <b>11</b> cfm/W
	24-35" Diameter	Fans must achieve an efficiency level of <b>13</b> cfm/W
	36-47" Diameter	Fans must achieve an efficiency level of <b>17</b> cfm/W
	• 48" Diameter	Fans must achieve an efficiency level of <b>19.5</b> 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. Dated sales receipt/invoice with retailer/contractor name, address, and phone number. Add installation date as well.
2. Documented fan performance rating from independent testing body.
3. Itemized list of equipment quantity, description, manufacturer, model number, or other identifying information as appropriate.

**Prequalification required?** No.

Equipment code	Equipment category	Incentive
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