

# 2018 Agricultural Programs



## Rebate Application

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### Business Member Information

Business Name \_\_\_\_\_  
Installation Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Contact Name \_\_\_\_\_  
Email \_\_\_\_\_  
Phone Number \_\_\_\_\_  
Account & Location #s \_\_\_\_\_

### Rebate Recipient

To release the rebate incentive check to an alternate party other than the cooperative business member, the member must specify an alternative mailing address and authorize with a signature below.

#### Please Send Rebate to (check one):

- Business Member       Alternative Recipient

Recipient Name \_\_\_\_\_  
Mailing Address \_\_\_\_\_  
City, State, Zip \_\_\_\_\_  
Contact Name \_\_\_\_\_

### Application Check List

- Rebate application with  
 Itemized project invoices (labor &  
 Equipment specifications

The undersigned does hereby certify that the undersigned is solely responsible for the accuracy of the information contained in this application. All rules of the program have been followed and the installation is complete. The undersigned acknowledges that nothing contained in the application imposes any liability on the cooperative for the work performed and information presented by the member, member's engineer, contractor, or vendor. The undersigned also authorized payment of incentive directly to the specified rebate recipient.

**Rebate applications due no later than December 14, 2018.**

**Member Signature**

**Date**

\_\_\_\_\_

\_\_\_\_\_

Received \_\_\_\_\_



Reviewed \_\_\_\_\_

# Agricultural Program

## Rules & Information

### Warranty Information

Rebate qualifications do not imply any representation or warranty of such equipment, design or installation by the cooperative. The cooperative shall not be responsible or liable for any personal injury or property damage caused by this equipment. The cooperative does not guarantee that a specific level of energy or cost savings will result from the implementation of energy conservation measures or the use of products funded under this program. In no event shall the cooperative be liable for any incidental or consequential damages.

### Additional Program Rules

1. Evaluation must be complete before funds will be issued for the rebate.
2. Members and vendors must submit itemized equipment invoices, along with rebate application and worksheet, to the cooperative. To ensure that the equipment installed meets the cooperative's performance standards, these invoices must itemize labor charges, quantity and price of the equipment installed, as well as information regarding the manufacturer and model numbers for all equipment included in the rebate.
3. Rebates must be applied for within 12 months of invoice date.
4. The cooperative reserves the right to conduct random inspections of installations.
5. Project must comply with all program specific rules and qualifications.
6. The member is responsible for checking with the cooperative to determine funding availability and to verify program parameters.

# Agricultural Ventilation

## Equipment & Rebate Info

Exhaust Fans \$15/each				
Fan Size (in.)	min CFM/watt req.	Actual CFM/watt	quantity	Rebate
				0
				0
				0

\*Actual CFM/watt > minimum CFM/watt (found on "Rules & Information" tab)

Circulation Fans \$25/ea				
Fan Size (in.)	min CFM/watt req.	Actual CFM/watt	quantity	Rebate
				0
				0
				0

High Volume, Low Speed (HVLS) Fans \$400/each				
Old fan size (in)	old quantity	HVLS fan size	new quantity	Rebate
				0
				0
				0

### Rebate Information

Project Cost  
Rebate

<b>\$0.00</b>

### Minimum Efficiencies

Circulation Fans - generally used to regulate airflow and temperature. As the diameter of fan increases, so should the efficiency. These fans work best in free stall barns with two, four, or six rows and are generally located in 30-40 foot intervals over the feed alley and free stall area.

Exhaust Fans - generally used for ventilation. To achieve *cross ventilation*, fans are installed on one wall to pull air from one side of the barn to the other. Exhaust fans also can be designed for *tunnel ventilation* where fans are installed on one end of the barn and move air across to the rest of the barn. generally thermostatically controlled to turn on banks of fans when the temperature hits the set point. Exhaust fans should be installed away from prevailing winds. Similar with circulation fans, when exhaust fan diameter increases, efficiency should

High-Volume, Low-Speed (HVLS) - these fans move large volumes of air over a large area. They are available in a range of sizes, typically from starting around four feet and ranging up to 24 feet in diameter. Energy savings is achieved through use of fewer fans to move the same CFM with a more efficient design.

Exhaust	CFM/watt
16-23 in.	10.5
24-35 in.	11.5
36-47 in.	15.5
48-51 in.	20.3
52-59 in.	20.8
60-72 in.	21.1

Through the wall & tunnel ventilation

static pressure 0.10

Circulation	CFM/watt
24-35 in.	11.9
36-47 in.	15.5
48-64 in.	17.7

panel, box, and cage fans  
static pressure 0.10

#### HVLS

HVLS fans should be fewer in quantity than the old fans

# Dairy Free Heater

## Equipment & Rebate Information

Dairy free heaters, also referred to as refrigeration heat recovery, can be one of the fastest paybacks on a dairy farm. The free heater recovers waste heat from the cooling compressors and uses it to preheat water generally used for sanitation. Free heaters reduce the cost of heating hot water and can improve efficiency of the refrigeration system, thus saving energy and costs.

### Old System Information

Cows milked/day	<input type="text"/>
Gallons of hot water used per day (avg 1-3 gals/cow/day)	<input type="text"/>
Electric water heater Temp (°F)	<input type="text"/>
Well water Temp (°F)	<input type="text"/>
Lbs milk/day	<input type="text"/>
Energy Factory (EF) electric water heater	<input type="text"/>
Water heater kW	<input type="text"/>
Water heater gallons	<input type="text"/>
Old System Energy Usage (kWh)	<input type="text" value="0"/>

### New System Information

Free heater efficiency	<input type="text"/>
New System Energy Usage (kWh)	<input type="text" value="0"/>
<b>Annual Energy Savings</b>	<input type="text" value="0"/>

### Cost Savings Information

\*check with your cooperative representative for seasonal or tiered rate structures

kWh Savings	\$/kWh	Months	kWh Cost Savings
0	<input type="text"/>	<input type="text"/>	\$0.00
0	<input type="text"/>	<input type="text"/>	\$0.00
Annual Cost Savings			\$0.00

### Rebate Information

Project Cost	<input type="text"/>	
<b>Rebate</b>	<b>\$0.00</b>	maximum rebate not to exceed 50% of project
Benefit Cost Ratio	#DIV/0!	BCR ≥ 2.00
Project Cost After Rebate	\$0.00	
Simple Payback (years)	<input type="text"/>	SPB > 1 year

# Dairy Plate Cooler

## Equipment & Rebate Information

Dairy plate coolers reduce milk temperature before sending the milk to the bulk tank. This saves energy by reducing the cooling load in the bulk tank. The milk is run through one side of the heat exchanger while cool (well) water passes through the other side of the heat exchanger and absorbs the heat from the fresh milk. Additional benefits include better quality milk from reduced bacteria growth due to the faster cooling process.

### System Information

# Cows milked/day	<input type="text"/>
Lbs. milked/cow/day	<input type="text"/>
Well water Temp (F)*	<input type="text"/>
Milking hr/day	<input type="text"/>
Compressor HP	<input type="text"/>

\*average 47°F can be used if temperature unknown

Annual Savings		
kW	1.0	
kWh	0	

### Cost Savings Information

\*check with your cooperative representative for seasonal or tiered rate structures

<b>kW Savings</b>	<b>\$/kW*</b>	<b>Months</b>	<b>kW Cost Savings</b>
1.0	<input type="text"/>	<input type="text"/>	\$0.00
1.0	<input type="text"/>	<input type="text"/>	\$0.00

<b>kWh Savings</b>	<b>\$/kWh*</b>	<b>Months</b>	<b>kWh Cost Savings</b>
0	<input type="text"/>	<input type="text"/>	\$0.00
0	<input type="text"/>	<input type="text"/>	\$0.00

### Rebate Information

Project Cost	<input type="text"/>	
<b>Rebate</b>	<b>\$0.00</b>	maximum rebate not to exceed 50% of project cost
Benefit Cost Ratio	#DIV/0!	BCR ≥ 2.00
Project Cost After Rebate	\$0.00	
Simple Payback (years)	0.0	SPB > 1 year

# Irrigator VFD

## Equipment & Rebate Information

Installing a Variable Frequency Drive (VFD) allows the pump to speed up or slow down to provide uniform application of water and maintain correct pressures throughout the irrigation system. Typically a VFD will be most beneficial for a system that has end guns or swing arms, precision application packages, or one pump supplying water to multiple irrigation systems.

### Irrigator Information

Motor HP

Annual Hours of Operation\*

\*typically 600-900 hrs/year

Annual Energy w/o VFD (kWh) 0

Annual Energy with VFD (kWh) 0

Annual Savings (kWh) 0

### Rebate Information

Project Cost

\$10 per Horse Power

**\$0**

# Robotic Milking

## Equipment & Rebate Information

The Robotic Milking Program provides a rebate for dairies that install automated single stall milking unit(s). The milking process at the dairy site will use fully automated robotic milking station(s) in place of conventional systems. The program is based on a typical 100 head dairy but can be adjusted to meet the needs of any dairy on a 1-20 head interval basis up to 400 cows. Dairies over 400 cows will be evaluated under the context of the existing program but on a case by case custom basis.

### Robotic Milking Parlor Information

Number of Cows	<input type="text"/>
Number of Stalls	<input type="text"/>
Manufacturer	<input type="text"/>
Model	<input type="text"/>

### Rebate Information

Project Cost	<input type="text"/>
\$5,000/stall	<input type="text" value="\$0"/>