

## Agricultural Energy Efficiency Program Ag Efficiency Plus

**Please indicate application type:**

- Calculated
  Itemized
  Itemized and Calculated

All applications require Forms 1 and 2. Depending on the type of project please also submit Form 3, 4, and/or 5. For combined projects submit all four or five forms. Please carefully review the application process below as applicable. You have the choice of receiving your payment directly or having it applied as a utility bill credit. Form 2 allows you to indicate the payee and your payment preference.

**Form 1 and 2**

**Calculated (Standard Performance Contract) Measures**

**Form 3**

**Calculated Terms and Conditions**

**Calculated (Standard Performance Contract) Measures**

**How To Apply**

A pre-inspection is required for all calculated projects. Please submit your application prior to installation. This requirement also applies to any combined itemized/calculated application.

**1. Submitting an Application**

Complete, sign and submit Forms 1, 2, and 3 prior to beginning any project installations. Please attach your detailed energy savings calculations – either engineering calculations or the SPC software. Please call **800-791-7541** to schedule a pre-inspection.

**2. Signing the AEEP Agreement upon approval**

When the inspection is complete and all calculations have been verified, a formal approval notification will be mailed to you from the AEE program along with 2 AEEP agreements. These agreements need to be signed and returned to for execution. Refer to the Calculated Terms and Conditions for details.

**3. Installing Your Project**

Once you've received formal approval, please move forward with the project installation.

**4. Submitting an Installation Report**

Upon completion of your project, please sign and submit the AEEP Installation Report along with invoices or other cost documentation. (The Installation Report will be provided to you). This document provides an alert that your project is complete. A reviewer will contact you within 5 business days to schedule a post-inspection. Please submit the Installation Report when the project is completed.

**5. Receiving Payment**

Upon approval of the final post-inspection, a formal notification will be sent to you. Incentive payments will be made directly by SCE and will take approximately up to 6 weeks to process.

**Itemized (Express Efficiency) Measures**

**Form 4**

**Form 5**

**Itemized Terms and Conditions**

**Itemized (Express Efficiency) Measures**

**How To Apply**

Pre-installation inspection may not be required for itemized projects. Please do not submit your application until the equipment is installed and operational. All equipment installations are subject to post-installation inspection at the discretion of SCE.

**1. Reserving Your Incentive**

It is recommended that you reserve your incentive funds before purchasing and installing equipment. **Call 800-791-7541 for a funding reservation.**

**2. Qualifying Your Equipment**

Use the Itemized Terms and Conditions to verify that the existing equipment (base case) meets program requirements and that the new equipment qualifies before you purchase and install it. **If you need help with qualifying equipment call 800-791-7541.**

**3. Purchasing and Installing Your Equipment**

Pre-installation inspection is not required for itemized measures. Once you have determined that your project meets the program Terms and Conditions you may purchase the new equipment and install it.

**4. Computing Your Incentive**

**Compute your incentive using Form 4 and/or Form 5** by multiplying the quantity installed (Qty) by the unit incentive amount (\$/unit) and write the total in the incentive column. Add all the incentive amounts in the incentive column and write the total incentive amount in the space provided.

**5. Completing Your Application**

Complete, sign and date Forms 1 and 2. Attach Form 4 and/or 5, the original itemized invoice (**include the model number and manufacturer of the equipment**), and the manufacturer's specification sheet for the equipment installed and send to the address below.

**6. Receiving Payment**

For itemized projects with rebates of \$3,000 or greater, a post-installation inspection is required. SCE reserves the right to make post-installation inspections on other installations, at its discretion. Upon completion/approval of the inspection the incentive will be paid directly by SCE. Incentives payments take approximately up to 6 weeks to process.



# Agricultural Energy Efficiency Program

## Ag Efficiency Plus

### APPLICATION FORM 1

Please complete Form 1 and 2 for all projects. Form 3 should be submitted with calculated projects and form 4 should be submitted with itemized projects. If your project includes both types of measures please submit all forms. Refer to the attached terms and conditions for calculated and itemized measures. For more information on eligibility of calculated measures please call 800-791-7541.

#### CUSTOMER INFORMATION (CUSTOMER / BUSINESS OWNER / BUILDER / DEVELOPER)

Company Name			
Company Mailing Address	City	State	ZIP
Contact Name	Title		
Contact Telephone Number	Contact Fax Number	E-Mail	

#### PROJECT TYPE(S)

<input type="checkbox"/> <b>CALCULATED</b> (SPC Retrofit / Upgrade) Use Form 3 Calculated Measures and Combination Measures require a pre and post installation inspection	<input type="checkbox"/> <b>ITEMIZED</b> (Express Efficiency Rebate) Use Form 4 Express Efficiency Itemized Measures do not require a pre installation inspection.
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Provide brief project name / description.

#### PROJECT SITE INFORMATION (SITE OF RETROFIT/PROJECT) Attach additional sheets if multiple sites.

Project Name			
Site Address	City	CA State	ZIP
Contact Name at Project Site	Contact Phone Number	Contact Email Address	
<b>3-</b> Service Account Number	Total Sq. Ft of Facility	Years since built or last major renovation	Total No. of Floors
SCE Account Executive	SCE Account Executive Phone Number	SCE Account Executive Email Address	

**PROPERTY TYPE:** (Check all that apply)

<input type="checkbox"/> Cash Grain Crop	<input type="checkbox"/> Cattle Feedlot	<input type="checkbox"/> Dairy Farm	<input type="checkbox"/> Refrigerated Warehouse
<input type="checkbox"/> Other Crop Farm	<input type="checkbox"/> Other Livestock	<input type="checkbox"/> Dairy Product Processing	<input type="checkbox"/> Water Supply System
<input type="checkbox"/> Ornamental Nursery	<input type="checkbox"/> Poultry/Egg Farm	<input type="checkbox"/> Crop Processing Facility	<input type="checkbox"/> Irrigation System
			<input type="checkbox"/> Other: _____



# Agricultural Energy Efficiency Program Ag Efficiency Plus APPLICATION FORM 2

## PAYMENT INFORMATION

CHECK SHOULD BE MADE PAYABLE TO:

Payee: Customer		Telephone Number	Fax Number
Mailing Address		City	State ZIP
Contact Name		Title	E-Mail
<b>Tax Identification Type (Select Only One)</b>		<b>Tax Status (Select Only One)</b>	
<input type="radio"/> Federal Tax ID _____ <input type="radio"/> SSN _____		<input type="radio"/> Corporation <input type="radio"/> Exempt _____ <input type="radio"/> Non-Corp <input type="radio"/> Exempt Reason _____	

Incentives are taxable and, if greater than \$600, will be reported to the IRS unless you are exempt. You will be required to submit a completed W9 for tax purposes. SCE will report your rebate as income on IRS form 1099. Please consult your tax advisor concerning the taxability of rebates.

## Utility Bill Credit (Please complete this section if you prefer payment in the form of a bill credit)

Check here and complete the following section ONLY if incentive payment is to be credited to the Utility account for the Applicant of Record.

3- Service Account Number	2- Customer Account Number	Signature	Date
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## AGREEMENT

I understand that SCE has made no warranty or representation regarding the qualifications of the companies providing the equipment and labor associated with the Project and that I am solely responsible for the selection of these companies to implement the Project. I understand that the selected companies are independent contractors and are not authorized to make any representation on behalf of SCE. I agree that SCE will have no role in resolving any disputes between me, the selected companies, and/or any other third parties.

I understand that the energy savings, incentives and installed costs are estimates only, and are subject to change based on SCE's review and approval, and that I am solely responsible for the selection, purchase, installation and ownership of this program.

I have authority to contract, on behalf of the legal owners of the Project Site, for installation of the measures, or I have obtained the permission of the legal owner of the Project Site to install the energy efficiency measures under my contract with the selected companies.

I understand the program may require inspections, measurements and/or verification of installations of measures applied for, and I agree to provide access to the Project Site for those purposes to SCE and/or its agents or assigns.

For calculated projects, pre-inspections are required and the application must be submitted prior to installation. A separate AEEP agreement will be provided upon approval by SCE. (This does not apply to itemized and other specific measures.)

As a qualified SCE customer, I certify that the indicated energy savings products are for use in my business facility and not for resale. I agree to provide SCE with documents establishing paid proof of purchase and installation of the measures applied for in this Application. I understand the rebate payments are based on related energy benefits over the life of the product. I agree that if (a) I do not provide Southern California Edison with 100% of the related energy benefits specified in the rebate form for the life of the product or for a period of five (5) years from receipt of rebate, whichever is less, or (b) I cease to be a customer of SCE during said time period, I shall refund a prorated amount of rebate dollars to SCE based on the actual period of time for which I provided the related energy benefits as an electric customer of SCE.

I understand that Itemized Measures must be purchased, installed and fully operational prior to submitting an Installation Report Form, and I understand that submission of this Application is not a guarantee of payment by SCE, nor is it a guarantee of funds availability. This program has a limited budget. Applications/Reservations are accepted on a first-come, first-served basis, until allocated funds are spent, or December 15, 2008, whichever comes first. In no case will SCE pay more than 50% of the project cost for calculated measures, 100% of the project cost for itemized measures, or an amount greater than \$350,000 per Project Site, whichever is less.

I agree that I have not received rebates, incentives or services for the same measure(s) from another utility, state or local program funded by the Public Goods Charge (PGC), and that this program is funded by California utility ratepayers and administered under the auspices of the California Public Utilities Commission. This program may be modified or terminated without notice.

I UNDERSTAND THAT SCE MAKES NO REPRESENTATION OR WARRANTY REGARDING MANUFACTURERS, DEALERS, CONTRACTORS, MATERIALS OR WORKMANSHIP. I AGREE TO INDEMNIFY, DEFEND AND HOLD HARMLESS, AND HEREBY RELEASES SCE, THEIR AFFILIATES, SUBSIDIARIES, PARENT COMPANIES, OFFICERS, DIRECTORS, AGENTS AND EMPLOYEES, FROM AND AGAINST ALL CLAIMS, DEMANDS, LOSSES, DAMAGES, COSTS, EXPENSES, AND LIABILITY (LEGAL, CONTRACTUAL, OR OTHERWISE), WHICH ARISE FROM OR ARE IN ANY WAY CONNECTED WITH ANY MEASURES INSTALLED.

I have read and understand the program requirements and terms and conditions set forth in this Application. I certify that the information I have provided is true and correct, and the project(s) for which I am requesting incentive(s) meet the requirements in this application package. Furthermore, I understand and agree that I must meet all eligibility criteria in order to receive a payment under this program.

Customer Contact Name (Print)	Title	Signature	Date
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This program is funded by California utility ratepayers and administered by Southern California Edison Company under the auspices of the California Public Utilities Commission, through a contract awarded to Global Energy Partners, LLC. Global Energy Partners has hired EnSave, Inc. as a subcontractor to assist in the implementation of this program. California customers who choose to participate in this program are not obligated to purchase any additional services offered by the contractor. The trademarks used herein are the property of their respective owners.

Este programa es financiado por los contribuyentes para uso general de California y administrado por Southern California Edison Company bajo auspicios de la Comisión de utilidades públicas de California, a través de un contrato concedido a Global Energy Partners, LLC. Global Energy Partners ha empleado a EnSave, Inc. como subcontratista para asistir a la puesta en práctica de este programa. No obligan a los clientes de California que eligen participar en este programa a comprar ningunos servicios adicionales ofrecidos por el contratista. Las marcas registradas usadas aquí son la característica de sus dueños respectivos.

**PLEASE MAKE A COPY OF THIS DOCUMENT FOR YOUR FILES**



# Agricultural Energy Efficiency Program Ag Efficiency Plus

## Calculated Measures - FORM 3

Project Name: \_\_\_\_\_

Anticipated Installation Date: \_\_\_\_\_

**Enter data in yellow cells**

Please indicate your anticipated completion date.

**Calculated Measures require a pre-installation inspection. Please submit the application prior to installation.**

### Energy Efficiency Measure Information for Calculated Projects

Provide a brief description of each measure. Identify whether the measure is lighting, air conditioning/refrigeration (AC&R), or other. Provide costs for each measure. Total measure cost includes, but is not limited to, audits, design, engineering, construction, materials, permits, fees, overhead and labor.

Calculated Measures				Lighting	AC&R	Other	Measure Costs \$
#	Site Name (and project description)			○ L	○ A	○ O	
1				○ L	○ A	○ O	
2				○ L	○ A	○ O	
3				○ L	○ A	○ O	
4				○ L	○ A	○ O	
5				○ L	○ A	○ O	

### Energy/On-Peak Demand Savings and Incentive Summary

Attach annual energy savings calculations, either using SPC software or engineering calcs. Enter the energy savings and demand reduction parameters below.

*Incentive Rates			
Lighting	\$0.05 / kWh	Other	\$0.08 / kWh
AC&R	\$0.14 / kWh		

Energy Savings					
Calculated Measure # from above	Annual Baseline Usage (kWh)	Annual Installed Usage (kWh)	Annual Energy Savings (kWh)	Incentive Rate* (\$/kWh)	Energy Incentive (\$)
1					
2					
3					
4					
5					

\*\*Total Project Cost (\$)

\_\_\_\_\_

<p><b>Calculated Energy Savings Totals</b> _____ kWh</p>	<p><b>Calculated Savings Incentive (\$)</b> _____</p>
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On-Peak Demand Reduction			
Calculated Measure # from above	Baseline On-Peak Demand (kW)	Installed On-Peak Demand (kW)	On-Peak Demand Reduction (kW)
1			
2			
3			
4			
5			

<p><b>On-Peak Demand Reduction</b> _____ kW</p>	
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**\*\*The incentive is capped at 50% of each measure installed cost. Project sites are limited to \$350,000 in incentives. An adjustment may be made after review of project costs.**

## Agricultural Energy Efficiency Program Ag Efficiency Plus

### Itemized Measures - FORM 4

Date Installed:

Enter data in yellow cells

**Ensure that your project will be approved** by checking that the measure meets the product specifications shown in the Itemized Terms and Conditions.

**Compute your incentive** by multiplying the Quantity installed (Qty) by the unit incentive amount (\$/unit) and write the total in the Incentive column. Add all the incentive amounts in the Incentive column and write the total incentive amount in the space provided. When your equipment is purchased, installed and operational you are ready to submit your application.

**Complete your application** by filling out, signing and dating Forms 1 and 2. Attach Form 4, the original itemized invoice, and the manufacturer's specification sheet for the equipment installed and send to the address provided on the cover sheet.

ITEMIZED MEASURE INFORMATION					
ID #	Measure Description - See Itemized Terms and Conditions for description of measures	Units	\$/units	Qty	Incentive \$/Units x Qty
<b>Lighting Itemized Measures</b>					
L-A1	Cold Cathode Fluorescent Lamp 3-8 watts	lamp	\$2.00		
L-B1	Screw-in Compact Fluorescent Lamp 5-13 watts	lamp	\$1.50		
L-B2	Screw-in Compact Fluorescent Lamp 14-26 watts	lamp	\$2.50		
L-B3	Screw-in Compact Fluorescent Lamp >=27 watts	lamp	\$3.50		
L-B4	Screw-in Compact Fluorescent Lamp 14-28 watts, Reflector Lamp	lamp	\$5.00		
L-C1	Hardwired Fluorescent Fixture 5-13 watts	fixture	\$9.00		
L-C2	Hardwired Fluorescent Fixture 14-26 watts	fixture	\$11.00		
L-C3	Hardwired Fluorescent Fixture 27-65 watts (incandescent basecase)	fixture	\$12.50		
L-C4	Hardwired Fluorescent Fixture 66-90 watts (incandescent basecase)	fixture	\$18.00		
L-C5	Hardwired Fluorescent Fixture >90 watts (incandescent basecase)	fixture	\$22.50		
L-C6	Hardwired Fluorescent Fixture 27-65 watts (mercury vapor basecase)	fixture	\$11.50		
L-C7	Hardwired Fluorescent Fixture 66-90 watts (mercury vapor basecase)	fixture	\$17.00		
L-C8	Hardwired Fluorescent Fixture >90 watts (mercury vapor basecase)	fixture	\$21.50		
L-D1	Induction Lamps and fixtures 55 - 100 watts	fixture	\$35.00		
L-D2	Induction Lamps and fixtures >100 watts	fixture	\$50.00		
L-E1	T-8 or T-5 Lamp and Electronic Ballast - 2 foot (T12 replacement only)	lamp	\$3.50		
L-E2	T-8 or T-5 Lamp and Electronic Ballast - 3 foot (T12 replacement only)	lamp	\$4.25		
L-E3	T-8 or T-5 Lamp and Electronic Ballast - 4 foot (T12 replacement only)	lamp	\$4.25		
L-E4	T-8 or T-5 Lamp and Electronic Ballast - 8 foot (T12 replacement only)	lamp	\$7.50		
L-E5	T-8 or T-5 Lamp - 2 foot lamp removed (T12 replacement only)	lamp	\$4.00		
L-E6	T-8 or T-5 Lamp - 3 foot lamp removed (T12 replacement only)	lamp	\$4.00		
L-E7	T-8 or T-5 Lamp - 4 foot lamp removed (T12 replacement only)	lamp	\$6.00		
L-E8	T-8 or T-5 Lamp - 8 foot lamp removed (T12 replacement only)	lamp	\$9.00		
L-F1	HID Fixture, Interior Pulse Start 0-35 watts (incandescent basecase)	fixture	\$18.00		
L-F2	HID Fixture, Interior Pulse Start 36-70 watts (incandescent basecase)	fixture	\$25.00		
L-F3	HID Fixture, Interior Pulse Start 71-100 watts (incandescent basecase)	fixture	\$40.00		
L-F4	HID Fixture, Interior Pulse Start 101-175 watts (incandescent basecase)	fixture	\$40.00		
L-F5	HID Fixture, Interior Pulse Start 176-250 watts (incandescent basecase)	fixture	\$40.00		
L-F6	HID Fixture, Interior Pulse Start 251-400 watts (incandescent basecase)	fixture	\$50.00		
L-F7	HID Fixture, Interior Pulse Start 0-35 watts (mercury vapor basecase)	fixture	\$12.50		
L-F8	HID Fixture, Interior Pulse Start 36-70 watts (mercury vapor basecase)	fixture	\$18.00		
L-F9	HID Fixture, Interior Pulse Start 71-100 watts (mercury vapor basecase)	fixture	\$38.00		
L-F10	HID Fixture, Interior Pulse Start 101-175 watts (mercury vapor basecase)	fixture	\$38.00		
L-F11	HID Fixture, Interior Pulse Start 176-250 watts (mercury vapor basecase)	fixture	\$38.00		
L-F12	HID Fixture, Interior Pulse Start 251-400 watts (mercury vapor basecase)	fixture	\$48.00		
L-F13	HID Fixture, Exterior Pulse Start 0-100 watts (incandescent basecase)	fixture	\$36.00		
L-F14	HID Fixture, Exterior Pulse Start 101-175 watts (incandescent basecase)	fixture	\$64.00		
L-F15	HID Fixture, Exterior Pulse Start > 176 watts (incandescent basecase)	fixture	\$100.00		
L-F16	HID Fixture, Exterior Pulse Start 0-100 watts (mercury vapor basecase)	fixture	\$22.00		
L-F17	HID Fixture, Exterior Pulse Start 101-175 watts (mercury vapor basecase)	fixture	\$30.00		
L-F18	HID Fixture, Exterior Pulse Start => 176 watts (mercury vapor basecase)	fixture	\$48.00		
L-G1	Ceramic Metal Halide (CMH)	lamp	\$25.00		
L-H1	Interior High Bay Linear Fluorescent: 400 watt basecase up to 244 watt replacement	fixture	\$100.00		
L-H2	Interior High Bay Linear Fluorescent: 400 watt basecase up to 360 watt replacement	fixture	\$75.00		
L-H3	Interior High Bay Linear Fluorescent: > 400 watt basecase up to 600 watt replacement	fixture	\$125.00		
L-I1	Interior Metal Halide Pulse Start Retrofit Fixture	lamp	\$45.00		
L-J1	Wall-box Lighting Sensor	sensor	\$16.50		
L-J2	Wall or Ceiling-mounted Lighting Sensor < 500 watts controlled	sensor	\$20.00		
L-J3	Wall or Ceiling-mounted Lighting Sensor ≥ 500 watts controlled	sensor	\$44.00		
L-J4	Integrated Sensor in High Bay Fixture	sensor	\$20.00		
L-K1	Photocell	photo cell	\$7.00		
L-L1	Timeclock	timeclock	\$36.00		
L-M1	LED Exit Sign	fixture	\$27.00		
L-N1	LED Channel Signage, Indoor <= 2ft	foot	\$4.00		
L-N2	LED Channel Signage, Outdoor <= 2ft	foot	\$2.00		
L-N3	LED Channel Signage, Indoor > 2ft	foot	\$6.00		
L-N4	LED Channel Signage, Outdoor > 2ft	foot	\$3.00		
<b>Total Lighting Incentive (\$)</b>					

See next page for the Additional Itemized Measures

## Agricultural Energy Efficiency Program Ag Efficiency Plus

### Itemized Measures - Form 4

Date Installed: \_\_\_\_\_

Project Sponsor: \_\_\_\_\_

ITEMIZED MEASURE INFORMATION					
ID #	Measure Description - See Itemized Terms and Conditions for description of measures	Units	\$/units	Qty	Incentive \$/Units x Qty
<b>Dairy Itemized Measures</b>					
D-A1	Milk Precoolers	precooler	\$1,000.00		
D-B1	Milk Transfer Pump Variable Speed Drive	drive	\$1,000.00		
D-C1	Milking Vacuum Pump Variable Speed Drive	drive	\$2,200.00		
D-D1	Compressor Heat Recovery Units (electric water heaters only)	CHR unit	\$900.00		
D-E1	Scroll Compressors for Bulk Tanks	compressor	\$500.00		
<b>Total Dairy Incentive (\$)</b>					
<b>Irrigation Itemized Measures</b>					
I-A1	Well Pump Variable Speed Drive	drive	\$1,250.00		
I-B1	Sprinkler to Drip Irrigation, check crop type and location: <input type="checkbox"/> Field Vegetables <input type="checkbox"/> Deciduous Trees <input type="checkbox"/> Vineyards <input type="checkbox"/> Citrus <input type="checkbox"/> Central Valley <input type="checkbox"/> Coastal	acre	\$44.00		
	I-C1				
<b>Total Irrigation Incentive (\$)</b>					
<b>Refrigeration Itemized Measures</b>					
R-B1	Air Cooled to Evaporative Cooled Condensers - multiplex	tons	\$195.00		
R-B2	Air Cooled to Evaporative Cooled Condensers - conventional	tons	\$195.00		
R-C1	Anti-Sweat Heat Controller	linear ft	\$14.00		
R-D1	Auto-Closer for Main Cooler Doors	closer	\$40.00		
R-D2	Auto-Closer for Main Freezer Doors	closer	\$50.00		
R-D3	Auto-Closer for Glass Doors for Walk-In Coolers	closer	\$40.00		
R-E1	Efficient Evaporator Fan Motors (SHP to ECM)	motor	\$20.00		
R-E2	Efficient Evaporator Fan Motors (SHP to PSC)	motor	\$20.00		
R-F1	Evaporator Fan Controller for Walk-in Coolers	controller	\$75.00		
R-G1	Floating Head Pressure Controller - air cooled	tons	\$70.00		
R-G2	Floating Head Pressure Controller - evap cooled	tons	\$70.00		
R-I1	Infiltration Barrier for Walk-ins (Strip Curtains)	square ft	\$3.00		
R-J1	Insulate Bare Suction Pipes	linear ft	\$1.00		
R-K1	Main Door Cooler Door Gaskets (walk-in)	linear ft	\$4.00		
R-K2	Main Door Freezer Door Gaskets (walk-in)	linear ft	\$4.00		
R-L1	Multiplex Compressor System - evap cooled	tons	\$300.00		
R-L2	Multiplex Compressor System - air cooled	tons	\$300.00		
R-L3	Multiplex Compressor System w/ Efficient Condenser - air cooled	tons	\$300.00		
R-L4	Multiplex Compressor System w/ Efficient Condenser - evap cooled	tons	\$300.00		
R-M1	New Low Temp Reach-in Display Case with doors (replace open)	linear ft	\$200.00		
R-M2	New Medium Temp Reach-in Display Case with Doors (replace open)	linear ft	\$150.00		
R-N1	Night Covers for Display Cases - low temp	linear ft	\$9.00		
R-N2	Night Covers for Display Cases - med temp	linear ft	\$9.00		
R-O1	Oversized Air Cooled Condenser	tons	\$175.00		
R-O2	Oversized Evaporative Cooled Condenser	tons	\$75.00		
R-P1	Replace Reach-in Case w/Doors with High Efficiency Case with Special Doors	linear ft	\$200.00		
R-Q1	Retrofit Glass Doors on Open Vertical Display Cases (low temp)	door	\$150.00		
R-Q2	Retrofit Glass Doors on Open Vertical Display Cases (medium temp)	door	\$75.00		
R-R1	Special Doors with Low Anti-Sweat Heat (low temp)	door	\$50.00		
R-S1	Vending Machine Controller	controller	\$90.00		
<b>Total Refrigeration Incentive (\$)</b>					
<b>Building Shell Itemized Measures</b>					
S-A1	Cool Roof	square feet	\$0.10		
S-B1	Reflective Window Film - Coastal	square feet	\$1.35		
S-B2	Reflective Window Film - Inland	square feet	\$1.35		
S-B3	Reflective Window Film - Desert	square feet	\$1.35		
<b>Total Building Shell Incentive (\$)</b>					

See next page for the Additional Itemized Measures



## Agricultural Energy Efficiency Program Ag Efficiency Plus

### Itemized Measures - Form 4

Date Installed: \_\_\_\_\_

Project Sponsor: \_\_\_\_\_

ITEMIZED MEASURE INFORMATION					
ID #	Measure Description - See Itemized Terms and Conditions for description of measures	Units	\$/units	Qty	Incentive \$/Units x Qty
<b>HVAC Itemized Measures</b>					
H-A1	16' High Volume Low Speed (HVLS) Fans	fan	\$330.00		
H-A2	18' High Volume Low Speed (HVLS) Fans	fan	\$330.00		
H-A3	20' High Volume Low Speed (HVLS) Fans	fan	\$330.00		
H-A4	24' High Volume Low Speed (HVLS) Fans	fan	\$330.00		
H-B1	12"-14" energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$35.00		
H-B2	12"-14" energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$25.00		
H-B3	16"-18" fans energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$35.00		
H-B4	16"-18" fans energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$30.00		
H-B5	20"-26" energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$40.00		
H-B6	20"-26" energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$30.00		
H-B7	36" energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$60.00		
H-B8	36" energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$50.00		
H-B9	48" energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$90.00		
H-B10	48" energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$70.00		
H-B11	50"-60" energy efficient Low Volume High Speed Exhaust or Circulation Fans - RETROFIT	fan	\$70.00		
H-B12	50"-60" energy efficient Low Volume High Speed Exhaust or Circulation Fans - NEW	fan	\$50.00		
H-C1	Heat Lamps	lamp	\$2.00		
H-D1	Heat Pads	pad	\$20.00		
H-E1	Ventilation Humidistat Controls	humidistat	\$50.00		
H-F1	Ventilation Thermostat Controls	thermostat	\$40.00		
H-H1	Advanced Evaporative Cooler	ton	\$123.00		
H-I1	Package Terminal Air Conditioners and Package Heat Pumps	unit	\$100.00		
H-J1	Setback Programmable Thermostat	unit	\$54.00		
H-K1	Variable Speed Drives HVAC Fans	hp	\$80.00		
H-L1	Variable Speed Drives for Ventilation Fans	hp	\$200.00		
<b>Total HVAC Incentive (\$)</b>					

\*The project incentive is capped at 100% of total project costs. Projects are limited to \$350,000 in incentives per site.

**\*Gross Total Incentive (\$)** \_\_\_\_\_



## Agricultural Energy Efficiency Program

# Ag Efficiency Plus Itemized (Express Efficiency) Motors Application - FORM 5

Date Installed: \_\_\_\_\_

Project Sponsor: \_\_\_\_\_

**Enter data in yellow cells**

**Compute your incentive** by multiplying the Quantity installed (Qty) by the unit incentive amount (\$/unit) and write the total in the Incentive column. Add all the incentive amounts in the Incentive column and write the total incentive amount in the space provided. When your equipment is purchased, installed and operational you are ready to submit your application.

**Complete your application** by filling out, signing and dating Forms 1 and 2. Attach the itemized Motors form, the original itemized invoice, and the manufacturer's specification sheet for the motor installed and send to the address provided on the cover sheet.

ITEMIZED MOTOR MEASURE INFORMATION					
ID #	Measure Description - See Terms and Conditions for description of measures	Units	\$/units	Qty	Incentive* \$/Units x Qty
<b>Premium Efficiency Motor Measures</b>					
M-1	Motors 1 HP	Motor	\$35.00		
M-2	Motors 1.5 HP	Motor	\$35.00		
M-3	Motors 2 HP	Motor	\$35.00		
M-4	Motors 3 HP	Motor	\$40.00		
M-5	Motors 5 HP	Motor	\$50.00		
M-6	Motors 7.5 HP	Motor	\$60.00		
M-7	Motors 10 HP	Motor	\$70.00		
M-8	Motors 15 HP	Motor	\$80.00		
M-9	Motors 20 HP	Motor	\$90.00		
M-10	Motors 25 HP	Motor	\$135.00		
M-11	Motors 30 HP	Motor	\$230.00		
M-12	Motors 40 HP	Motor	\$300.00		
M-13	Motors 50 HP	Motor	\$320.00		
M-14	Motors 60 HP	Motor	\$355.00		
M-15	Motors 75 HP	Motor	\$540.00		
M-16	Motors 100 HP	Motor	\$720.00		
M-17	Motors 125 HP	Motor	\$945.00		
M-18	Motors 150 HP	Motor	\$1,260.00		
M-19	Motors 200 HP	Motor	\$1,260.00		
Incentives for motors above 200 hp must be calculated using Form 3. Calculated measures require pre-installation inspection.				<b>Total Gross Incentive (\$)</b>	

\*The project incentive is capped at 100% of total project costs. Projects are limited to \$350,000 in incentives site.

### ITEMIZED MOTORS TERMS AND CONDITIONS

Agricultural Energy Efficiency Program offers incentives to customers that install qualifying motors for agricultural applications. Itemized motor requirements are based on NEMA premium efficiency standards for nominal full load efficiencies, published by the Consortium for Energy Efficiency (CEE). Minimum efficiency requirements for itemized incentives are listed in Table 1.

This program covers three phase induction motors of open drip proof (ODP), and totally enclosed and fan cooled (TEFC) classifications. These motors are also known as "open" and "closed" motors respectively. Itemized incentives are available on general purpose, NEMA Design A and B qualifying motors (TEFC & ODP) ranging in size from 1 hp to 200 hp.

Customers who are replacing motors that meet the above conditions should make sure that the Nominal Full Load Efficiency of the new motor will meet or exceed the qualifying efficiency level for that class enclosure type of motor. NEMA Design C and D are polyphase induction motors that are considered to be special-purpose motors and not eligible for incentives. Motors not listed in the latest version of Motor Master Tables are not eligible for incentives.

Please submit a copy of the manufacturer's specification sheet with your application.

TABLE 1  
CONSORTIUM FOR ENERGY EFFICIENCY (CEE)  
MINIMUM NOMINAL EFFICIENCY STANDARDS

Motor Size hp	Open Drip Proof			Totally Enclosed Fan Cooled		
	3600 rpm	1800 rpm	1200 rpm	3600 rpm	1800 rpm	1200 rpm
1	0.770	0.855	0.825	0.770	0.855	0.825
1.5	0.840	0.865	0.865	0.840	0.865	0.875
2	0.855	0.865	0.875	0.855	0.865	0.885
3	0.855	0.895	0.885	0.865	0.895	0.895
5	0.865	0.895	0.895	0.885	0.895	0.895
7.5	0.885	0.910	0.902	0.895	0.917	0.910
10	0.895	0.917	0.917	0.902	0.917	0.910
15	0.902	0.930	0.917	0.910	0.924	0.917
20	0.910	0.930	0.924	0.910	0.930	0.917
25	0.917	0.936	0.930	0.917	0.936	0.930
30	0.917	0.941	0.936	0.917	0.936	0.930
40	0.924	0.941	0.941	0.924	0.941	0.941
50	0.930	0.945	0.941	0.930	0.945	0.941
60	0.936	0.950	0.945	0.936	0.950	0.945
75	0.936	0.950	0.945	0.936	0.954	0.945
100	0.936	0.954	0.950	0.941	0.954	0.950
125	0.941	0.954	0.950	0.950	0.954	0.950
150	0.941	0.958	0.954	0.950	0.958	0.958
200	0.950	0.958	0.954	0.954	0.962	0.958

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### Lighting

**LAMP AND BALLAST DISPOSAL:** The customer is responsible for the proper disposal/recycling of any waste generated including the disposal of fluorescent lamps (which contain mercury) and ballasts suspected of containing PCBs. (Any fluorescent ballast dated pre-1979 should be considered to contain PCBs unless otherwise labeled.) For more information on lamp recycling and ballast disposal contact the California Department of Toxic Substances Control at <http://www.dtsc.ca.gov/HazardousWaste/UniversalWaste/index.cfm>.

#### L-A. Cold Cathode Fluorescent Lamps

A cold cathode lamp must replace an incandescent lamp of at least 10 watts. Cold cathode lamps must range from 3 watts to 8 watts and may be medium (Edison) or candelabra base. Cold cathode lamps must be rated for at least 18,000 average life hours.

#### L-B. Screw-in Compact Fluorescent Lamps (CFLs)

CFLs must replace incandescent lamps. Replacing CFLs with CFLs is not allowed. Rebates will not be paid for a customer location that has previously received a rebate for a CFL without a pre-installation inspection. Customers requesting a rebate for additional fixtures at a service location that previously participated in this measure are subject to pre-inspection. Lamps purchased at retail outlets do not qualify for a rebate if the price has been reduced through a utility buy-down program.

**Self-ballasted** (one-piece screw-in) lamps must be ENERGY STAR<sup>®</sup>-qualified. Visit [www.energystar.gov](http://www.energystar.gov) for a list of qualifying lamps.

**Modular** (two-piece lamp and ballast adapter) units >15 watts must have electronic ballasts and meet the minimum efficacy requirements in Table 1 and the minimum lumen output requirements in Table 2.

Table 1: Minimum Efficacy Requirements

Lamp Power & Configuration		Minimum Efficacy (Lumens Per Watt, Based on Initial Lumen Data)
Bare Lamp	Power < 15	45.0
	Power ≥ 15	60.0
Covered Lamp (no reflector)	Lamp Power < 15	40.0
	Lamp Power ≥ 15 and < 19	48.0
	Lamp Power ≥ 19 and < 25	50.0
	Lamp Power ≥ 25	50.0
Covered Lamp (with reflector)	Lamp Power < 20	33.0
	Lamp Power ≥ 20	40.0

Table 2: Minimum Lumen Output

Wattage of A-Shaped Incandescent Bulb	CFL Minimum Lumen Output (based on 100 hr. initial values)
40	Minimum of 450
60	Minimum of 800
75	Minimum of 1,100
100	Minimum of 1,600
150	Minimum of 2,600

#### L-C. Hardwired Fluorescent Fixtures

Only complete new fixtures or modular retrofits with hardwired electronic ballasts qualify, and must replace an incandescent or mercury vapor fixture. Cols/ballasts must meet the minimum efficacy requirements of Table 1 above. CFL ballasts must be programmed-start or programmed rapid-start with a power factor (PF) of ≥ 90% and total harmonic index distortion (THD) of ≤ 20%. Linear fluorescent lamps/ballasts must meet the specifications defined in Measure L-E below. Compact and linear fluorescent fixtures are not eligible for rebates under Measures L-B, L-E, and L-H. Fixtures purchased at retail outlets do not qualify for a rebate if the price has been reduced through a utility buy-down program.

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### L-D. Induction Lamps and Fixtures

Only complete new induction fixtures  $\geq 55$  watts that replace existing incandescent or mercury vapor fixtures qualify. Induction lamps  $< 55$  watts are considered CFLs and may qualify under Measure L-B. Each new fixture must have a mean lamp/ballast efficacy  $> 50$  lumens per watt (LPW). Indoor, outdoor area, and parking lot lighting qualify, but roadway and street lighting do not.

#### L-E. T8 or T5 Linear Fluorescent Lamps with Electronic Ballasts

Rebate applies to existing T12 lamps and magnetic ballasts that are replaced by T8 or T5 lamps with electronic high frequency ( $\geq 20$  kHz). Underwriters Laboratory (UL) listed ballasts that are warranted against mechanical or electrical defects for five years, and have a PF of  $\geq 90$ . At full light output, ballasts for 4-foot and 8-foot lamps must have THD of  $< 20\%$ , while ballasts for 2-foot and 3-foot lamps must have THD of  $\leq 32\%$ .

Programmed start/Programmed rapid-start ballasts must be used for T5 lamp installations. Replacement T5 lamps in low bay installations (under 15') must provide indirect lighting only. T8 and T5 replacement lamps must meet the Color Rendering Index (CRI) and Rated Lamp Life standards listed in Table 3 below, and the manufacturer's specification sheet must document these characteristics for each ballast type.

When T8 lamps are being installed for general illumination purposes, instant start ballasts must be used. When occupancy sensors are installed to control circuits in lamp/ballast retrofits, programmed start/programmed rapid-start ballasts are recommended in order to maximize lamp life. Occupancy sensor rebates are allowed with linear fluorescent lighting retrofits, but must meet the requirements of Measure L-J. Replacement lamps and ballasts rebated in Measure L-E are not eligible for rebates under Measures L-C and L-H.

Table 3: Lamp and Ballast Requirements

Lamp Type & Size	Ballast Type	CRI	Minimum Rated Lamp Life (3 hrs/start)
T8 – 2-ft, 3-ft, 4-ft	Programmed Start/ Programmed Rapid-start	$\geq 80$	24,000 hours
T8 – All sizes	Instant Start	$\geq 80$	18,000 hours
T5 – All sizes	Programmed Start or Programmed Rapid-start	$\geq 82$	20,000 hours

A de-lamping rebate may also apply. De-lamping is the permanent removal of existing T12 lamps/ballasts and unused lamp holders (tomb stones) from existing fixtures without replacing the lamps. To receive credit for de-lamping, customers must not remove more than half of the existing lamps and ballasts (along with lamp holders) from each fixture. The total number of lamps claimed for de-lamping may not be more than the number of replacement T8 or T5 lamps installed. Customers are responsible for deciding whether de-lamping will maintain adequate light levels.

#### L-F. High-Intensity Discharge (HID) Fixtures, Pulse Start

Only complete new HID (metal halide or high-pressure sodium) fixtures that replace, one for one, existing incandescent or mercury vapor fixtures qualify. The HID system must have a mean lamp/ballast efficacy of 45 lumens per watt (LPW) for compact sources ( $\leq 100$  watts), and 55 LPW for standard or full-size sources ( $> 100$  watts). Metal halide fixtures under 400 watts can use either electronic or electromagnetic ballasts. Roadway and street lighting do not qualify.

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### **L-G. Ceramic Metal Halide (CMH) Fixtures**

Only complete new CMH fixtures that replace, one for one, existing incandescent, halogen, or halogen infrared fixtures qualify. CMH lamps must be < 75 watts with mean lamp/ballast efficacy > 55 LPW.

#### **L-H. Interior High Bay Linear Fluorescent Fixtures**

Only complete new T8 or T5 fixtures qualify. New fixtures must not exceed the maximum replacement wattage listed on rebate application and must be less than the wattage of the existing lamp. Fixtures must use T8 or T5 lamps and ballasts as specified in Measure L-E. New fixtures must replace, one for one, existing fixtures ≥ 400 watts: Incandescent, Mercury Vapor, T12 High or Very High Output Fluorescent, Standard Metal Halide, or High Pressure Sodium. All fixtures must be hardwired and installed at a height over 12' above the finished floor. Exterior installations do not qualify. Fixtures are not eligible for rebates under Measures L-C and L-E, but may qualify for an occupancy sensor rebate under Measure L-J, provided all requirements are met.

#### **L-I. Interior Metal Halide Pulse Start Retrofit Fixtures**

Only pulse-start metal halide lamps and ballasts ≤ 350 watts that replace existing standard metal halide lamps and ballasts ≥ 400 watts qualify. Both retrofit kits and new fixtures qualify.

#### **L-J. Lighting Occupancy Sensors**

This rebate applies to hardwired passive infrared and/or ultrasonic detectors that control interior lighting fixtures only. Self-contained wall-box lighting sensors are defined as units without an exterior switch pack or relay that are designed to replace a standard wall switch. Integrated sensors in high bay fixtures are permanently installed in the lighting fixture and must control all lamps in the fixture. Wattage controlled requirements are listed in the table below where applicable.

Measure	Occupancy Sensor Type	Wattage Controlled
L-J1	Wall-box	N/A
L-J2	Wall or Ceiling Mounted	<500 watts
L-J3	Wall or Ceiling Mounted	≥500 watts
L-J4	Integrated Sensor in High Bay Fixture	N/A

#### **L-K. Photocells**

Rebate applies to built-in or stand-alone photoelectric cells that switch outdoor lighting loads on at dusk and off at dawn.

#### **L-L. Timeclocks**

Timeclocks must control lighting equipment. All units must feature a minimum 3-hour battery backup to avoid time loss during a power outage. For outdoor lighting without a photocell, astronomical time clocks (where on-off time follows sunset and sunrise) are required.

#### **L-M. Light Emitting Diode (LED) Exit Signs**

Only new exit signs that replace incandescent exit signs qualify. Non-electrified (such as tritium) and remote exit signs are not eligible. All new exit signs must meet UL-924 requirements. Exit signs must have a usage level ≤ 5 watts and a minimum product life of 10 years or be listed as ENERGY STAR<sup>®</sup>-qualified. Manufacturer's information stating the model number and ENERGY STAR<sup>®</sup> qualification or other qualifying specification sheet must be submitted with each rebate form. New exit signs must meet local fire codes. Retrofit kits are not eligible.

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### **L-N. Light Emitting Diode (LED) Channel Signs**

This measure must replace incandescent-lighted or neon-lighted channel letter signs. Retrofit kits or complete replacement LED signs are eligible. Replacement signs cannot use more than 20% of the actual input power of the sign that is replaced. Measure the length of the sign as follows:

1. Measure the length of each individual letter at the centerline. Do not measure the distance between letters.
2. Add up the measurements of each individual letter to get the length of the entire sign being replaced.

#### **Dairy**

##### **D-A. Milk Precooler**

Plate coolers must be set up to have a minimum of 1:1 water to milk flow ratio. Plate coolers must have an open, once in – once out water flow system. Plate coolers may not be closed, chilled water systems. Plate coolers may consist of first an open, in-out water system plus a closed, chilled water system.

##### **D-B. Milk Transfer Pump Variable Speed Drive**

All milk transfer pump (MTP) variable speed drives (VSD) must be installed with sonic level sensor units rather than with fluid level floats that turn on a two or three speed motor. Pump motors must be variable speed motors rather than multiple speed motors. The plate cooler, through which the milk transfer pump pumps the milk, must have an open water system. The plate cooler must not be a closed, chilled water system. The MTP VSD may be installed where the plate cooler has an open water system and then a closed water system. The MTP VSD may be installed on single-phase power with three-phase adapter or installed on three-phase power supply. A line reactor is recommended to further reduce harmonics on the power line.

##### **D-C. Milking Vacuum Pump Variable Speed Drive**

Milking vacuum pump variable speed drives must be installed on single-phase power with three-phase adapter or installed on three-phase power supply. Units must have manual and automatic emergency shutoffs. A line reactor is recommended to further reduce harmonics on the power line.

##### **D-D. Compressor Heat Recovery Unit (must have electric water heater)**

Compressor heat recovery units must be installed only where the facility's water is heated with electricity. Units must be sized to meet the minimum cooling needs of the compressor refrigeration system as determined by the producer's equipment dealer.

##### **D-E. Scroll Compressor**

Scroll compressors must meet or exceed the minimum specifications necessary to meet the cooling requirements of the refrigeration system as determined by the producer's equipment dealer. Qualified refrigeration technicians must install units.

#### **Irrigation**

##### **I-A. Well Pump Variable Speed Drive (VSD)**

VSD incentives are for application on well pump systems. VSD added to any type of (working) well pump qualifies for rebate, whether for irrigation or other application, including centrifugal booster pumps. Claiming this measure under Itemized Measures may lead to a smaller rebate than under Calculated Measures, due to the operating hours assumed in the estimation of savings, which are relatively low for irrigation. A 3% impedance choke is recommended.

## Agricultural Energy Efficiency Program

### Ag Efficiency Plus

### Itemized Measures

#### ITEMIZED MEASURE TERMS AND CONDITIONS

##### **I-B. Sprinkler to Drip Irrigation**

This measure must convert from a high-pressure, impact-type, sprinkler irrigation system (50 psi operating pressure or more at the sprinkler head) or surface furrow irrigation system to a micro-irrigation system. Not applicable to new plantings of vineyards or orchards unless a vineyard or orchard was the previous crop on the field. Drip tape systems are not eligible. **Include an Assessor's Parcel Map or other documentation to verify acreage.**

##### **I-C. Low Pressure Sprinkler Nozzles**

This measure must convert from a high-pressure, sprinkler system nozzle (50 psi operating pressure or more at the sprinkler head) or overflow valve of a surface furrow irrigation system. Must be accompanied by a pumping plant analysis to ensure reasonable pumping efficiency (45% Overall Pumping Efficiency or above) after the conversion. Portable hand move or solid set systems may apply.

##### **Refrigeration**

- Low temperature covers temperatures below 0°F.
- Medium temperature refers to refrigerated space temperatures between 0°F and 35°F.

##### **R-B. Air Cooled to Evaporative Cooled Condensers**

Must replace an existing air cooled condenser with an evaporative condenser. The replacement should take place in hot/dry inland and desert-like climates (excludes climate zones with coastal weather characteristics). Replacement of a standard air cooled condenser with a standard evaporative condenser can take place for both conventional multiplex and single compressor systems. New evaporative condenser should be sized at roughly 25°F TD (temperature difference) above ambient wet bulb.

##### **R-C. Anti-Sweat Heat (ASH) Controls**

Must install a device that senses the relative humidity in the air outside of the display case and reduces or turns off the glass door (if applicable) and frame anti-sweat heaters at low humidity conditions. Equivalent technologies that can reduce or turn off anti-sweat heater based on the amount of condensation formed on the inner glass pane may also qualify. This measure cannot be used in conjunction with measures R-P & R-R. Rebate is based on the total linear footage of the case.

##### **R-D. Auto-Closers for Main Cooler or Main Freezer Doors**

The auto-closer should be applied to the main insulated opaque doors (Measure R-D1, R-D2) or glass doors (R-D3) of a walk-in cooler or freezer. The auto-closer must be able to firmly close that door when it is within one inch of full closure.

##### **R-E. Efficient Evaporator Fan Motor**

Applicable to existing standard efficiency shaded pole (SHP) evaporator fan motor of refrigerated display cases or fan coil systems in walk-ins. Shaded pole motors to be replaced by either electronically commutated motors (ECM) or permanent-split-capacitor (PSC) motors. This measure cannot be used in conjunction with Evaporator Fan Controller (Measure R-F).

##### **R-F. Evaporator Fan Controller for Walk-in Coolers**

Must reduce airflow of evaporator fans in medium-temperature walk-in coolers when compressor(s) cycle off and there is no refrigerant flow through the evaporator. Must control a minimum fan load of 1/20 horsepower where the fan(s) operate continuously at full speed. Must reduce fan motor power by at least 75% during the compressor off-cycle. **Do not use** if any of the following conditions apply: 1) the compressor runs all the time with high duty cycle; 2) the evaporator fan does not run at full speed all the time; 3) the evaporator motor runs on poly-phase power; 4) the evaporator fan motor is not shaded-pole; or 5) evaporator does not use off-cycle or time-off defrost.

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### **R-G. Floating Head Pressure Controller**

Contact Ag Efficiency Plus at 800-791-7541 for details.

#### **R-I. Infiltration Barrier for Walk-ins (Strip Curtains)**

Must install new strip curtains or plastic swinging doors on doorways of walk-in boxes and refrigerated warehouses. This rebate is not available for replacement of existing strip curtains that have useful life left. Rebate is based on the square footage of the doorway.

#### **R-J. Insulation for Bare Suction Lines**

Must insulate bare refrigeration suction lines of 1 5/8 inches or less on existing equipment only. Medium temperature lines require 3/4-inch of flexible closed-cell nitrile rubber, or equivalent insulation, and low temperature lines require 1-inch of the same insulation. Insulation exposed to outside weather must be jacketed (such as with a medium-gauge aluminum jacket) or protected from the weather in some way. Rebate is based on the length, in linear feet, of the insulation installed.

#### **R-K. Door Gaskets on Solid Doors**

Must replace a worn gasket on the insulated opaque door of a walk-in or reach-in cooler or freezer. Replacement gaskets must meet the manufacturer's installation specifications, specifically regarding dimensions, materials, attachment method, style, compression, and magnetism. Rebate is based on total door perimeter in linear feet.

#### **R-L. Multiplex Compressor System**

Replace inefficient single compressor per line-up system with a high efficiency, multiplex (parallel system). The high efficiency features of this measure include floating head pressure by means of a variable speed fan control and mechanical sub-cooling. In a multiplex system, multiple compressors serve a specific suction group and each suction group serves one or more line-ups having similar temperatures. We recommend an unevenly sized approach. Cannot be used in conjunction with Floating Head Pressure Controller (Measure R-G). Note: Combination high efficiency Multiplex Compressor System with Efficient Condenser (Measure R-L3, R-L4) must meet requirements for multiplex compressor system noted above plus requirements of Oversized Air Cooled Condenser (Measure R-O1) or Oversized Evaporative Condenser (Measure R-O2).

#### **R-M. New Reach-in Display Case with Doors (Low and Medium Temperatures)**

Must replace an existing open multi-deck display case with a new high efficiency reach-in unit with standard glass doors with electronically commutated motor (ECM) fan, T-8 lamps and electronic ballast. This measure can be applied to self-contained or remote cases. New display cases are rebated based on their length. New case length must be equal to or shorter than original case.

#### **R-N. Night Covers for Display Cases**

Must install a cover on an otherwise open display case to decrease cooling load of the refrigerated case during off hours. The rebate is based on the linear footage of the installed night cover. It is recommended that these film type covers have small, perforated holes to decrease moisture buildup. The cover must be applied for a period of at least six hours in a 24-hour period. Customer should consider the following: using proper compressor capacity modulation mechanisms (such as variable speed drive (VSD) or cylinder un-loader); using evaporator pressure regulator (EPR) and possibly resetting to higher suction temperatures when shields are applied; resizing TVX and resetting suction pressure to a higher value. Consult with the case manufacturer or an authorized representative to determine if installing night covers will impact system performance.



# Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

## ITEMIZED MEASURE TERMS AND CONDITIONS

### **R-O. Oversized Condenser**

This measure addresses existing multiplex systems that can benefit from more efficient refrigeration condensers. Must replace existing condenser with an energy efficient unit equipped with several additional control mechanisms. This measure cannot be used in conjunction with Floating Head Pressure Controller (Measure R-G) since it already includes it as part of its required features. It is only applicable to existing multiplex systems and does not apply to those converted from single compressor to multiplex. (For converted, see Measure R-B.) New retrofit air cooled systems should operate at 8°F TD above ambient dry bulb temperature for low temperature and 13°F TD for medium temperature systems with EER of 105 Btu/hr/watt (for the condenser only). Retrofit evap cooled systems should operate at 18°F TD above ambient wet bulb temperature with EER of 240 Btu/hr/watt (condenser). It also includes the use of variable speed drives and variable set point floating head pressure controls.

### **R-P. Replace Reach-in Case w/Doors with High Efficiency Case with Special Doors**

A new high efficiency reach-in display case must replace an existing low temperature self-contained or remote reach-in as shown in the table below. This measure cannot be used in conjunction with Measure R-C.

Existing	Replacement
T-12 lamps, magnetic ballast	T-8 lamps, electronic ballast
Shaded pole (SHP) fan motor	Electronically commutated motor (ECM) fan
Standard glass doors	Low/No anti-sweat glass double-pane doors meeting requirements of Measure R-R

### **R-Q. Retrofit Glass Doors on Open Vertical Display Case**

Contact Ag Efficiency Plus at 800-791-7541 for details.

### **R-R. Special Doors with Low/No Anti-Sweat Heat on Low Temperature Display Cases**

Must replace an existing standard glass door of a low temperature reach-in display case with a special glass door that requires minimum to no anti-sweat heat (ASH). Doors must prevent condensation from occurring within the frame assembly. Total door rail, glass, and frame heater amperage (at 120 volts) cannot exceed 0.39 amps per foot of display case. Rebate is based on number of doors replaced. This measure cannot be used in conjunction with Measure R-C.

### **R-S. Vending Machine Controller**

Intended for refrigerated vending machines containing only non-perishable bottled and canned beverages. Controller must include a passive infrared occupancy sensor to turn off fluorescent lights and compressor when surrounding area is unoccupied for 15 minutes or longer. Control logic should periodically power up machine at two-hour intervals to maintain product temperature and provide compressor protection. Refurbished vending machines that include this option are eligible.

## **Building Shell**

### **S-A. Cool Roof**

Roof must be flat or "low-slope" where rise is not greater than 2 inches of rise in 12 inches of run. Roof must be located in climate zones 2-15. Building must have electrically or natural gas engine-driven compression cycle or gas-fueled absorption and must not have a radiant barrier between the ceiling and the surface of the roof. Material must be applied over air-conditioned space only. Exposed HVAC ducting is eligible for Cool Roof application. Eligible products are listed on the Cool Savings Program Qualifying Products database at [www.coolroofs.org](http://www.coolroofs.org). Eligible products must have a minimum five-year manufacturer's warranty. Installation contractors must have a valid California contractor's license and must provide a 2-year warranty that must be printed on or attached to the invoice.

## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### S-B. Reflective Window Film

Film must have a minimum five-year manufacturer's warranty. Rebates are not available for windows with northern exposure. Space must be cooled by vapor-compression air conditioner (evaporative-cooled space not eligible). Film must have either a solar heat gain coefficient (SHGC)  $\leq 0.39$  and be applied to clear, single-pane glass, or film can have an SHGC  $\leq 0.47$  and visible transmittance/solar heat gain coefficient (VT/SHGC) ratio  $> 1.3$ . Specification must be documented on the invoice, as well as square footage installed. To convert Shading Coefficient (SC) to SHGC, use the following equation:  $SHGC = SC \times .87$ .

#### Heating, Ventilation, Air Conditioning

##### H-A. High Volume Low Speed (HVLS) Circulation Fans

Fans must meet or exceed the following minimum specifications:

Fan Size	Minimum Efficiency CFM/Watt at 0" static pressure (inches H <sub>2</sub> O)
16'-24' High Volume Low Speed (HVLS) circulation fans (3-phase required)	125.0

##### H-B. Low Volume High Speed Circulation and Exhaust Fans

Fans must meet or exceed the following minimum specifications:

Fan Size	Circulation Fans	Exhaust Fans
	Minimum Efficiency CFM/Watt at 0" static pressure (inches H <sub>2</sub> O)	Minimum Efficiency CFM/Watt at 0.1" static pressure (inches H <sub>2</sub> O)
12" – 14"	8.0	7.0
16" – 18"	9.8	8.5
20" – 22"	10.0	9.0
24" – 26"	14.0	11.9
36"	20.4	16.2
48"	21.9	17.6
50" – 52"	22.5	18.0
54" – 56"	23.0	18.0

Low volume, high speed fans must be tested and have published efficiencies by either BESS (Bioenvironmental and Structural Systems) Laboratory, <http://www.bess.uiuc.edu/>, or Air Movement, and Control Association International, Inc. (AMCA), <http://www.amca.org/>.

##### H-C. Heat Lamps

Rated wattage of the heat lamp must be  $\leq 125$  watts and replace an existing heat lamp with wattage  $\geq 150$  watts.

##### H-D. Heat Pads

Rated wattage of the heat pad must be  $\leq 130$  watts.

##### H-E. Ventilation Humidistat Controls

Humidistat control incentives are for application on ventilation fan systems.

##### H-F. Ventilation Thermostat Controls

Thermostat control incentives are for application on ventilation fan systems.



## Agricultural Energy Efficiency Program Ag Efficiency Plus Itemized Measures

### ITEMIZED MEASURE TERMS AND CONDITIONS

#### **H-H. Advanced Evaporative Cooler**

Must replace an existing, vapor-compression air conditioning system, or the existing compressor must be made inoperative. Must not have "constant bleed" option. No rebate is available for CEC climate zones 1 and 3. Tonnage on rebate form is based on the capacity of the package unit that is being replaced. For evaporative coolers, one equivalent ton of cooling is defined as 1300 cfm of 0.1" Static Pressure. The invoice should contain information describing what is being replaced. An advanced evaporative cooler (AEC) must have a rigid, manufactured evaporative media with a rated saturation effectiveness of 0.85 or better (a natural fiber pad is not allowed - the rigid media is generally 12" thick), and be equipped with water quality management system that provides positive removal of sump water on a regular interval (a bleed system is not allowed).

#### **H-I. Package Terminal Air Conditioners and Package Heat Pumps**

Package terminal air conditioners (PTAC) and Package terminal heat pumps (PTHP) are through-the-wall, self contained units and are 2 tons (24,000 Btu/hr) or less. Only those units that have an EER that is 20% higher than the minimum are eligible. Minimum EER is calculated from the following equations:

$$\text{PTAC Min EER} = 10.9 - (0.213 \times \frac{\text{Capacity}}{1000} + 1,000) \text{ (capacity in Btu/hr*)}$$

$$\text{PTHP Min EER} = 10.8 - (0.213 \times \frac{\text{Capacity}}{1000} + 1,000) \text{ (capacity in Btu/hr*)}$$

\*If the capacity is less than 7,000 Btu/hr, use 7,000. If the capacity is > 15,000 Btu/hr, use 15,000.

#### **H-J. Setback Programmable Thermostat**

Must automatically adjust the temperature setting of your heating and air conditioning system at pre-selected times to make sure energy is consumed only when needed. Must have automatic setback feature. The system "fan" switch must have an "on" feature that circulates air continuously.

#### **H-K. Variable Speed Drives for HVAC Fans**

These VSD incentives are for fan applications on HVAC distribution systems. The maximum fan size is 100 hp. The installation of a VSD on a HVAC fan is eligible for a rebate only if throttling devices, such as inlet vanes, bypass dampers and throttling valves, are removed or permanently disabled. A 3% impedance choke is recommended.

#### **H-L. Variable Speed Drives for Ventilation Fans**

These VSD incentives are for application on ventilation fan systems. A 3% impedance choke is recommended.