Appendix F

Itemized Measures Descriptions and Rates

Itemized (Express Efficiency) Summary of Program Rules

The SPC program application may also be used to apply for Express Efficiency itemized measures. These measures are paid on a per unit basis, and do not require calculations. You simply indicate the quantity of measures installed and submit the application using forms 1, 2 and 4. Please refer below for a list of measures and incentive rates.

Pre-installation inspections are not required. However, post-installation inspections are required for rebates of $3,000 or greater. All other projects are subject to random post-inspections.

- **Eligibility**

The program is open to any non-residential customer in SDG&E territory with peak demand greater than 100 kW. Please refer to the terms and conditions in section 3 to make sure your measure qualifies. Submit an application once the product is installed.

- **Incentive Caps**

Itemized measures are limited to 100% of the installed measure cost, not to exceed $350,000 per project site.

- **How to Apply**

1. Reserving Your Incentive

It is recommended that you reserve your incentive funds before purchasing and installing equipment. Call (800) 644-6133 for a funding reservation.

2. Qualifying Your Equipment

Use the Itemized Terms and Conditions (below) to verify that the existing equipment (base case) meets program requirements and that the new equipment qualifies in this application to ensure that your new equipment qualifies before you purchase and install it. If you need help with qualifying equipment, call (800) 644-6133. Changes from the 2006 program are listed in table F-1 below.

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

For the Itemized (Express Efficiency) Measures, the incentive payment is made on a per item basis (see Table F.2 below). Compute your incentive by multiplying the Quantity installed (Qty) by the unit incentive amount ($/unit).

Incentives are limited to 100% of the costs of the measure. The maximum incentive is $350,000 per project site.

5. Completing Your Application

You may apply by using forms specific to the Itemized (Express Efficiency) program. These forms can be completed manually using the hand-written (PDF) forms, or can be completed electronically using either Excel forms or with the SPC software available on Program CD-ROM. Complete, sign and date application forms, and attach the original itemized invoice (Include the model number and manufacturer of the equipment),and the manufacturer's specification sheet for the equipment installed.

Submit to:

San Diego Gas & Electric
Express Efficiency Program
PO Box 232440
San Diego CA 92193-2440

1. Itemized Measure Rates

Following is a list of measures offered and the corresponding incentive rate on a per unit basis. Please refer to the terms and conditions for specific requirements of each measure.

Table F-1. Eligible Measures covered by the Itemized (Express Efficiency) Measure Approach

Measures	Incentive Rate
Lighting Itemized (Express Efficiency) Measures	
L-A. Cold Cathode Fluorescent Lamp, 3-5 watts	$2.00 / lamp
L-B. Screw-in Compact Fluorescent Lamps	
5–13 watts	$3.50 / lamp
14–26 watts	$3.50 / lamp
> 27 watts	$4.25 / lamp
14–26 watts, Reflector	$6.00 / lamp
L-C. Compact and Linear Fluorescent Fixtures	
5–13 watts	$11.00 / fixture
14–26 watts	$11.00 / fixture
Incandescent Base case (27–65 watts)	$12.50 / fixture
Incandescent Base case (66–90 watts)	$18.00 / fixture
Incandescent Base case (> 90 watts)	$22.50 / fixture
Mercury Vapor Base case (27–65 watts)	$11.50 / fixture
Mercury Vapor Base case (66–90 watts)	$17.00 / fixture
Mercury Vapor Base case (> 90 watts)	$21.50 / fixture
L-D. Induction Lamps and Fixtures	
55–100 watts	$35.00 / lamp
> 100 watts	$50.00 / lamp
L-E. T-8 or T-5 Linear Fluorescent Lamps and Electronic Ballasts	
Lamp Installation - 2-foot lamp	$3.50 / lamp
Lamp Installation - 3-foot lamp	$4.25 / lamp
Lamp Installation - 4-foot lamp	$4.25 / lamp
Lamp Installation - 8-foot lamp	$7.50 / lamp
Delamping - 2-foot lamp	$4.00 / lamp
Delamping - 3-foot lamp	$4.00 / lamp
Delamping - 4-foot lamp	$6.00 / lamp
Delamping - 8-foot lamp	$9.00 / lamp
L-F. HID Fixtures, Interior Pulse Start	
Incandescent Base case (0–35 watts)	$18.00 / fixture
Incandescent Base case (36–70 watts)	$25.00 / fixture
Incandescent Base case (71–100 watts)	$40.00 / fixture
Incandescent Base case (101–175 watts)	$40.00 / fixture
Incandescent Base case (176–250 watts)	$40.00 / fixture
Incandescent Base case (251–400 watts)	$50.00 / fixture
Mercury Vapor (0–35 watts)	$12.50 / fixture
Mercury Vapor (36–70 watts)	$18.00 / fixture
Mercury Vapor (71–100 watts)	$38.00 / fixture
Mercury Vapor (101–175 watts)	$38.00 / fixture
Mercury Vapor (176–250 watts)	$38.00 / fixture
Mercury Vapor (251–400 watts)	$48.00 / fixture

L-F. HID Fixtures Continued, Exterior Pulse Start	
Incandescent Base case (0–100 watts)	$36.00 / fixture
Incandescent Base case (101–175 watts)	$64.00 / fixture
Incandescent Base case (>=176 watts)	$100.00 / fixture
Mercury Vapor Base case (0–100 watts)	$22.00 / fixture
Mercury Vapor Base case (101–175 watts)	$30.00 / fixture
Mercury Vapor Base case (>=176 watts)	$48.00 / fixture
L-G. Ceramic Metal Halide (CMH)	$50.00 / lamp
L-H. Interior High Bay Linear Fluorescent, T5 or T8 fixtures w/ 4 or more lamps	$100.00 / fixture
L-I. Interior Metal Halide Pulse Start Retrofit Fixture	$45.00 / lamp
L-J. Occupancy Sensors	
Wall-box lighting sensor	$16.50 / sensor
Wall or ceiling-mounted lighting sensor	$44.00 / sensor
High Bay Lighting Sensor	$44.00 / sensor
L-K. Photocells	$7.00 / photocell
L-L. Time Clocks	$36.00 / time clock
L-M. LED Exit Signs	$27.00 / fixture
L-N. LED Channel Signage	
Indoor <=2 ft.	$4.00 / ft.
Outdoor <=2 ft.	$2.00 / ft.
Indoor > 2 ft.	$6.00 / ft.
Outdoor > 2 ft.	$3.00 / ft.
Air Conditioning Itemized (Express Efficiency) Measures	
AC-A. Reflective Window Film	
Coastal	$1.35 / square ft.
Inland	$1.35 / square ft.
Desert	$1.35 / square ft.
AC-B. Variable Frequency Drives HVAC Fans with Motors <= 100 HP	$80.00 / hp
Food Service Itemized (Express Efficiency) Measures	
FS-A. Connectionless Steamers	
Connectionless Electric Steamers Full load efficiency 50% or greater	$750.00 / unit
Connectionless Gas Steamers Full load efficiency 38% or greater	$750.00 / unit
FS-B. Insulated Holding Cabinets	
Full Size - energy rate less than or equal to 0.4 kW	$300.00 / unit
Three Quarter Size energy rate less than or equal to 0.3 kW	$250.00 / unit
Half Size energy rate less than or equal to 0.2 kW	$200.00 / unit
FS-C. Commercial Fryer	
Commercial Electric Fryer, Cooking Efficiency 80% or greater	$200.00 / unit
Commercial Gas Fryer, Cooking Efficiency 50% or greater	$500.00 / unit
FS-D. Commercial Ice Machine	
Air Cooled 101-200 lbs per 24 hrs.	$300.00 / unit
Air Cooled 201-300 lbs per 24 hrs.	$300.00 / unit
Air Cooled 301-400 lbs per 24 hrs.	$300.00 / unit
Air Cooled 401-500 lbs per 24 hrs.	$300.00 / unit
Air Cooled 501-1,000 lbs per 24 hrs.	$400.00 / unit
Air Cooled 1,001-1,500 lbs per 24 hrs.	$500.00 / unit
Air Cooled > 1,500 lbs per 24 hrs.	$500.00 / unit

FS-E. Commercial Griddle	
Commercial Electric Griddle, Cooking Efficiency > 70% or greater	$300.00 / unit
Commercial Gas Griddle, Cooking Efficiency > 38% or greater	$125.00 / unit
FS-F. Commercial Combination Oven	
Commercial Electric Combination Oven, Cooking Efficiency > 60% or greater	$1,000.00 / unit
Commercial Gas Combination Oven, Cooking Efficiency > 40% or greater	$750.00 / unit
FS-G. Commercial Convection Oven	
Commercial Electric Convection Oven, Cooking Efficiency > 70% or greater	$350.00 / unit
Commercial Gas Convection Oven, Cooking Efficiency > 40% or greater	$500.00 / unit
FS-H. Reach-In Refrigerators	
Solid-Door Reach-In Refrigerator Tier II CEE, 1 door/<19 cu. ft.	$75.00 / unit
Solid-Door Reach-In Refrigerator Tier II CEE, 1 door/19-30 cu. ft.	$100.00 / unit
Solid-Door Reach-In Refrigerator Tier II CEE, 2 door/31-60 cu. ft.	$150.00 / unit
Solid-Door Reach-In Refrigerator Tier II CEE, 3 door/61-90 cu. ft.	$225.00 / unit
FS-I. Reach-In Freezers	
Solid-Door Reach-In Freezer Tier II CEE, 1 door/<19 cu. ft.	$100.00 / unit
Solid-Door Reach-In Freezer Tier II CEE, 1 door/19-30 cu. ft.	$200.00 / unit
Solid-Door Reach-In Freezer Tier II CEE, 2 door/31-60 cu. ft.	$325.00 / unit
Solid-Door Reach-In Freezer Tier II CEE, 3 door/61-90 cu. ft.	$500.00 / unit
FS-J. Reach-In Refrigerators	
Glass-Door Reach-In Refrigerator Tier I CEE, 1 door/<19 cu. ft.	$100.00 / unit
Glass-Door Reach-In Refrigerator Tier I CEE, 1 door/19-30 cu. ft.	$125.00 / unit
Glass-Door Reach-In Refrigerator Tier I CEE, 2 door/31-60 cu. ft.	$150.00 / unit
Glass-Door Reach-In Refrigerator Tier I CEE, 3 door/61-90 cu. ft.	$200.00 / unit
Glass-Door Reach-In Refrigerator Tier II CEE, 1 door/<19 cu. ft.	$125.00 / unit
Glass-Door Reach-In Refrigerator Tier II CEE, 1 door/19-30 cu. ft.	$150.00 / unit
Glass-Door Reach-In Refrigerator Tier II CEE, 2 door/31-60 cu. ft.	$200.00 / unit
Glass-Door Reach-In Refrigerator Tier II CEE, 3 door/61-90 cu. ft.	$300.00 / unit
Agricultural Itemized (Express Efficiency) Measures	
A-A. Sprinkler to Drip Irrigation (Central Valley or Coastal)	
Field/Vegetables	$44.00 / acre
Deciduous Trees	$44.00 / acre
Vineyard	$44.00 / acre
A-B. Low Pressure Sprinkler Nozzles (Central Valley or Coastal)	
Permanent	$1.15 nozzle
Portable	$1.15 nozzle
Refrigeration Itemized (Express Efficiency) Measures	
R-A. Night Covers for Multi-deck and Horizontal Display Cases	
Medium Temperature Case	$9.00 / linear ft.
Low Temperature Case	$9.00 / linear ft.
R-B. Strip Curtains for Walk-In Boxes	$3.00 / square ft.
R-C. New Refrigeration Display Case with Doors (Low Temperature Case)	$200.00 / linear ft
R-D. New Refrigeration Display Case with Doors (Medium Temperature Case)	$150.00 / linear ft.
R-E. New High Efficiency Refrigeration Display Case with Special Doors (Low Temp)	$200.00 / linear ft.
R-F. Special Doors with Low/No Anti-Sweat Heat on Low Temp Display Cases	$50.00 / door
R-G. Anti-Sweat Heater (ASH) Controls	$14.00 / linear ft.
R-H. Insulation for Bare Suction Lines	$1.00 / linear ft.

R-I. Door Gaskets on Solid Doors for Coolers or Freezers	
For Cooler	$4.00 / linear ft
For Freezer	$4.00 / linear ft
R-J. Door Gaskets on Glass Doors	$4.00 / linear ft.
R-K. Auto-Closers for Main Cooler Doors	$40.00 / closer
R-L. Auto-Closers for Main Freezer Doors	$50.00 / closer
R-M. Evaporator Fans Controller for Walk-in Coolers	$75.00 / controller
R-N. Vending Machine Controller	$90.00 / controller
R-O. Efficient Evaporator Fan Motor Electronically Commutated Motor (ECM)	$20.00 / motor
R-P. Efficient Evaporator Fan Motor Permanent Split Capacitor (PSC) Motor	$20.00 / motor
Natural Gas Itemized (Express Efficiency) Measures (not applicable for SCE customers)	
G-A. Storage Water Heater	$2.00 / MBtuh Input
G-B. Space Heating Boiler	
Steam	$1.00 / MBtuh Input
Water	$1.00 / MBtuh Input
Large	$1.00 / MBtuh Input
G-C. Commercial Boiler	$1.50 / MBtuh Input
G-D. Instantaneous Water Heater	$2.00 / MBtuh Input
G-E. Process Boiler	
Steam	$2.00 / MBtuh Input
Water	$2.00 / MBtuh Input
G-F. Commercial Pool Heaters	$2.00 / MBtuh Input
G-G. Direct Contact Water Heater	$2.00 / MBtuh Input
G-H. Pipe Insulation	
Low Pressure Steam Applic. (LF) 1 in	$2.00 / linear ft.
Low Pressure Steam Applic. (LF) 2 in	$3.00 / linear ft.
Hot Water Applic. (Sq ft) 1 in	$2.00 / linear ft.
Hot Water Applic. (Sq ft) 2 in	$3.00 / linear ft.
G-I. Tank Insulation	
High Temperature Applic. (LF) 1 in	$3.00 / square ft.
High Temperature Applic. (LF) 2 in	$4.00 / square ft.
Low Temperature Applic. (LF) 1 in	$2.00 / square ft.
Low Temperature Applic. (LF) 2 in	$3.00 / square ft.
G-J. Energy Star Clothes Washer	
3.5 cf Tier I MEF = 1.42	$35.00 / unit
3.5 cf Tier II MEF = 1.60	$75.00 / unit
3.5 cf Tier III = 1.80	$100.00 / unit
G-K. Greenhouse Heat Curtain	$0.20 / square ft
G-L. Infrared Film for Greenhouses	$0.03 / square ft

2. What's New in 2006?

Itemized (Express Efficiency) Measure Changes

- **New Itemized Measures** – The following measures have been added to the itemized measure list:
  - *Cold Cathode Fluorescent Lamps (L-A);*
  - *Commercial Gas Pressureless Steamers (FS-A2);*
  - *Commercial Electric Fryers (FS-C1);*
  - *Commercial Gas Fryers (FS-C2);*
  - *Commercial Ice Machines (FS-D);*
  - *Commercial Electric Griddles (FS-E1);*
  - *Commercial Gas Griddles (FS-E2);*
  - *Commercial Electric Combination Ovens (FS-F1);*
  - *Commercial Gas Combination Ovens (FS-F2);*
  - *Commercial Electric Convection Ovens (FS-G1); and*
  - *Commercial Gas Convection Ovens (FS-G2).*
- **Removed from Itemized -** The following measures have been removed from the itemized measure list:
  - *Packaged Terminal Air Conditioners or Packaged Heat Pumps;*
  - *Setback Programmable Thermostats;*
  - *Advanced Evaporative Coolers;*
  - *Glass Doors on Open Display Cases;*
  - *Air-Cooled Condenser to Evaporative Condenser;*
  - *Energy Efficient Condenser;*
  - *High Efficiency Multiplex Compressor System;*
  - *High Efficiency Multiplex Compressor System with Efficient Condenser*;
  - *Setback Programmable Thermometers – Gas; and*
  - *Low-Flow Pre Rinse Spray Valves – Gas.*
- **Terminology Changes** – The following categories have been renamed:
  - *Other HVAC Itemized Measures* are now referred to as *Air Conditioning Measures*; and
  - *Other Technology Measures* are now referred to as *Agricultural Measures.*

3. Itemized Measure Descriptions

Lighting

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 2 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. Compact Fluorescent Lamps (CFL's)

CFL's must replace incandescent lamps. Replacing CFL's with CFL's 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®-qualified. Visit 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		**Minimum Efficacy** (Lumens Per Watt, Based on Initial Lumen Data)
Bare Lamp	Power < 15 Power ≥15	45.0 60.0
Covered Lamp (no reflector)	Lamp Power< 15 Lamp Power ≥ 15 and < 19 Lamp Power ≥19 and < 25 Lamp Power ≥25	40.0 48.0 50.0 50.0
Covered Lamp (with reflector)	Lamp Power < 20 Lamp Power ≥ 20	33.0 40.0

Table 2: Minimum Lumen Output Requirements

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

L-C. Compact and Linear Fluorescent Fixtures

Only complete new fixtures or modular retrofits with hardwired electronic ballasts qualify, and must replace an incandescent or mercury vapor fixture. CFL's/ 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 ≥0.90 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.

L-D. Induction Lamps and Fixtures

Only complete new induction fixtures ≥55 Watts that replace existing incandescent or mercury vapor fixtures qualify. Induction lamps < 55 Watts are considered CFL's and may qualify under Measure 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 (≥20 kHz), Underwriters Laboratory (UL) listed ballasts that are warranted against mechanical or electrical defects for five years, and have a PF of ≥0.90. 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 ≤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	≥80	24,000 hours
T8 – All sizes	Instant Start	≥80	18,000 hours
T5 – All sizes	Programmed Start or Programmed Rapid-start	≥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 (≤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.

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 with 4 or more lamps qualify. New fixtures must not exceed 244 watts each. High bay fixtures must use T8 or T5 lamps and ballasts as specified in Measure L-E. New fixtures must replace, one for one, existing incandescent, T12 F96 Very High Output fluorescent, or High Intensity Discharge (HID) fixtures ≥ 400 Watts in interior installations over 15 feet. All fixtures must have a reflector with a minimum of 90% reflectivity. Exterior installations do not qualify. High bay 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 Pulse Start Metal Halide 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. 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. Minimum and maximum wattage controlled requirements for each sensor type are listed in the table below.

Occupancy Sensor Type	Minimum Wattage Controlled	Maximum Wattage Controlled
Wall-box	216 watts	500 watts
Wall or Ceiling Mounted	576 watts	1,000 watts
Wall or Ceiling Mounted High Bay Lighting*	936 watts	1,200 watts

* Refer to Measure L-H for a description of High Bay Lighting Fixtures

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

L-M. Exit Signs- Light Emitting Diode (LED)
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®-qualified. Manufacturer's information stating the model number and ENERGY STAR® 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.

L-N. Channel Signs (LED)
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.

Refrigeration

- Low temperature covers temperatures below 0°F.
- Medium temperature refers to refrigerated space temperatures between 1°F and 35°F.

R-A. Night Covers for Open Vertical and Horizontal 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.

R-B. Strip Curtains for Walk-in Boxes
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-C. & R-D. New Refrigeration 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-E. New High Efficiency Refrigeration Display Case with Special Doors (Low Temp)
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-G.

Existing	Replacement
T-12 lamps, magnetic ballast	T-8 lamps, electronic ballast
Shaded pole fan motor	ECM fan
Standard glass doors	Low/no anti-sweat glass double pane doors meeting the requirements of measure F

R-F. 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-G.

R-G. 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-E & R-F. Rebate is based on the total linear footage of the case.

R-H. 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 nitrite 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-I. 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-J. Door Gaskets on Glass Doors
Must replace a worn gasket on a reach-in glass door(s) of a 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-K. & R-L. Auto-Closers for Main Cooler or Main Freezer Doors
The auto-closer should be applied to the main insulated opaque door(s) 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-M. 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 fan 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.

R-N. 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.*

R-O. & R-P. Efficient Evaporator Fan Motor
Applicable to existing standard efficiency shaded pole 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-M.

Food Service

For a list of qualifying food service equipment visit http://www.fishnick.com/saveenergy/rebates.

FS-A1. Electric Commercial Pressureless Steamers (Connectionless/Boilerless)
Qualifying pressureless or boilerless steamers must have cooking energy efficiency rating of 50% or greater. Cooking energy efficiency is based on full load efficiency testing (potato cooking test) in accordance with the American Society for Testing and Materials (ASTM) Standard F1484. Consult with the manufacturer or manufacturer's representative to determine if a specific model qualifies.

FS-A2. Gas Commercial Pressureless Steamers (Connectionless/Boilerless) (not applicable for SCE Customers)
Qualifying pressureless or boilerless steamers must have cooking energy efficiency rating of 38% or greater. Cooking energy efficiency is based on full load efficiency testing (potato cooking test) in accordance with the American Society for Testing and Materials (ASTM) Standard F1484. Consult with the manufacturer or manufacturer's representative to determine if a specific model qualifies.

FS-B. Commercial Insulated Hot Food Holding Cabinets
This measure does not include cook and hold equipment. Equipment must be an electric hot food holding cabinet that is fully insulated on all sides and has solid insulated doors, in full, three-quarter and half sizes respectively as listed in the table below. Qualifying cabinets must not exceed the maximum idle energy rate of 20 watts/ft^3 in accordance with the ASTM Standard F2140 test method. Consult with the manufacturer or manufacturer's representative to determine if a specific model qualifies.

Cabinet Size	Qualifying Energy Rate (ER)
Full Size	Insulated with ER $\leq$ 0.8 kW
¾ Size	Insulated with ER $\leq$ 0.6 kW
½ Size	Insulated with ER $\leq$ 0.4 kW

FS-C1. Commercial Electric Fryers
This measure includes commercial electric fryers that are Energy Star® qualified or have a demonstrated cooking energy efficiency rating of $\geq$ 80% utilizing ASTM Standard F1361. Energy Star® maintains an updated list of qualifying products and specifications at www.energystar.gov. Consult with the manufacturer or manufacturer's representative to determine if a non- Energy Star® qualified model meets the ASTM Standard.

FS-C2. Commercial Gas Fryers (not applicable for SCE Customers)
This measure includes commercial gas fryers that have a demonstrated cooking energy efficiency rating of ≥ 50% utilizing ASTM Standard F1361-05.

FS-D. Commercial Ice Machines
This measure covers commercial ice machines that produce 60 grams (2 oz.) of lighter ice cubes, as well as flaked, crushed or fragmented ice that meets the energy efficiency thresholds by Ice Harvest Rate in the table below. Performance data is based on Air-Conditioning and Refrigeration Institute (ARI) Standard 810. Only air-cooled ice machines (self-contained or remote condensing units) are eligible. Visit www.ari.org for product information and testing procedures.

Product Type	Ice Harvest Rate Capacity *	Incentive Threshold kWh/100 lbs. of Ice (or less)
Air-Cooled	101-200 lbs/day	9.4
Air-Cooled	201-300 lbs/day	8.5
Air-Cooled	301-400 lbs/day	7.2
Air-Cooled	401-500 lbs/day	6.1
Air-Cooled	501-1,000 lbs/day	5.8
Air-Cooled	1,001-1,500 lbs/day	5.5
Air-Cooled	>1,500 lbs/day	5.1

* Ice harvest rate (capacity in lbs.) is the amount of ice produced in 24 hours.

FS-E1. Commercial Electric Griddles
Commercial electric griddles with cooking energy efficiency of ≥ 70% qualify, as tested in accordance with ASTM F1275.

FS-E2. Commercial Gas Griddles (not applicable for SCE Customers)
Commercial gas griddles with cooking energy efficiency of ≥ 38% qualify, as tested in accordance with ASTM F1275.

FS-F1. Commercial Electric Combination Ovens
Commercial electric combination ovens with cooking energy efficiency ≥ 60% qualify, as tested in accordance with ASTM F1639-05.

FS-F2. Commercial Gas Combination Ovens (not applicable for SCE Customers)
Commercial gas combination ovens with cooking energy efficiency ≥ 40% qualify, as tested in accordance with ASTM F1639-05.

FS-G1. Commercial Electric Convection Ovens
Commercial electric convection ovens with cooking energy efficiency ≥ 70% qualify, based on heavy load (potato) cooking as tested in accordance with ASTM F1496.

FS-G2. Commercial Gas Convection Ovens (not applicable for SCE Customers)
Commercial gas convection ovens with cooking energy efficiency ≥ 40% qualify, based on heavy load (potato) cooking as tested in accordance with ASTM F1496.

FS-H through J. Commercial Reach-In Refrigerators and Freezers
This incentive applies towards the purchase of new or replacement energy efficient commercial reach-in solid door refrigerators and freezers, and glass door reach-in refrigerators. In all categories, the refrigeration system shall be built-in (packaged), cases with remote refrigeration systems do not qualify. Used or rebuilt equipment is not eligible. Customers must provide proof (manufacturer's specification sheet) that the appliance meets the Consortium for Energy Efficiency (CEE) Tier I or Tier II energy efficiency specifications using ASHRAE Standard 117-1992 (38°F +/- 2°F).

Commercial Solid Door Reach-In Refrigerators and Freezers, and Glass Door Reach-In Refrigerators

Product Description	CEE Maximum Daily Energy Usage
Solid Door Reach-In Refrigerators Tier II CEE	≤ 0.06 V + 1.22 kWh/day
Solid Door Reach-In Freezers Tier II CEE	≤ 0.28 V + 0.97 kWh/day
Glass Door Reach-In Refrigerator Tier I CEE	≤ 0.12 V + 3.34 kWh/day
Glass Door Reach-In Refrigerator Tier II CEE	≤ 0.086 V + 2.39 kWh/day

Air Conditioning

AC-A. 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) ≤0.39 and be applied to clear, single-pane glass, or film can have an SHGC ≤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 x .87

AC-B. Variable Frequency Drives (VFDs)
VFD incentives are for fan applications on HVAC distribution systems. The maximum fan size is 100 hp. The installation of a VFD 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.

Agriculture

A-A. 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) 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.**

A-B. 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). 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.

Natural Gas (not applicable for SCE Customers)

Technical Requirements: Rebates are available only for the replacement of older, inefficient gas equipment. If you are uncertain whether equipment qualifies, contact a utility representative. California Energy Commission (CEC) and/or Gas Appliance Manufacturers Association (GAMA) equipment efficiency listed ratings prevail over all submitted technical documentation, unless otherwise approved. If the size and efficiency are not shown on the invoice, you must include a manufacturer's specification sheet documenting these characteristics. Properties such as homes, condominiums, apartments or any other residential dwellings do not qualify.

G-A. Storage Water Heater

Water heaters must meet efficiency requirements based on size, as shown in Table 1. If the size and efficiency are not shown on the invoice, you must include a manufacturer's specification sheet documenting these characteristics. Equipment used for pools and spas do not qualify.

G-B. Space Heating Boiler

Boilers must meet efficiency requirements based on size and type, as shown in Table 2. Include a manufacturer's specification sheet documenting these characteristics. Boiler must be used for space heating for human comfort as defined by California Titles 20 & 24 standards. Equipment used for pools and spas does not qualify.

G-C. Commercial Boiler (Non Space Conditioning/Non-Process Related)

Available to commercial end-use customers (NAICS codes 111, 112, 42, 44, 45, 48-49, 51-56, 61-62, 71-72, 81 & 92). Only boilers > 75,000 Btuh qualify. Must meet a minimum thermal efficiency of 84%. Include a manufacturer's specification sheet documenting these characteristics. Boiler must not be used for space conditioning. Boiler must not be used for industrial (process) end-use. Equipment used for pools and spas does not qualify.

G-D. Instantaneous Water Heater (Non-Process Related)

Available to commercial end-use customers only (NAICS codes 111, 112, 42, 44, 45 ,48-49, 51-56, 61-62, 71-72, 81 & 92). Water heaters must meet efficiency requirements based on size, as shown in Table 3. Only instantaneous water heaters (as defined by the California Energy Commission Title 20 & 24 standards) used for non-process hot water applications qualify. The manufacturer name and equipment model number must be provided. customers must provide proof of the tankless nature of the water heater (e.g., manufacturer equipment specification sheets).

G-E. Process Boiler

Available to industrial end-use customers who manufacture a sellable product only (NAICS codes 31-33). Manufacturing involves the mechanical or chemical transformation of materials or substances into a new product which is neither a structure nor any other fixed improvement. Boilers must meet a minimum combustion efficiency of 82% as installed. Only process boilers (i.e., units not primarily used for domestic hot water, space conditioning, pool or spa use) qualify. The manufacturer name and equipment model number must be provided. A flue gas analysis measured under full load conditions is required to document combustion efficiency after installation is complete.

G-F. Commercial Pool Heater

Available for swimming pool heating and must replace pre-existing pool heater. The commercial pool and spa heater must be certified to meet the following requirements: 1) heater must be equal to or greater than 84% thermal efficiency, 2) must have an "on/off" switch and have no pilot light and (3) size of equipment must be between 500 MBtuh and 2000 MBtuh.

G-G. Direct Contact Water Heater

Only direct contact water heaters for process end-uses qualify (NAICS codes 31-33). In direct contact water heater systems design, heat from a flame comes into direct contact with small droplets of cold water which run through a stainless steel heat exchange media. Droplets composed from the process come into direct contact with rising heat from the flame and the water is heated directly. Boilers must meet efficiency requirements based on size as shown in Table 4.

G-H. Pipe Insulation (Non-Space Conditioning) Rebates

1" or 2" of fiberglass, foam, or calcium silicate insulation must be added to existing nonresidential bare pipe systems which transfer fluid directly from gas-fired equipment. Minimum qualifying pipe diameter is 1". Insulation thickness, liquid or steam temperature will determine the rebate amount. Additional required information will be the manufacturer's name, insulation material type, and the material k-value rating. The applicant will need to fill out the "Pipe Insulation" worksheet on the application.

1" Pipe Insulation Rebates

- $3.00/lf- 1" Pipe insulation; low pressure (≤ 15 psig) **steam** application: 200 - 250 degrees F
- $2.00/lf- 1" Pipe insulation; hot water application: 120 - 200 degrees F

2" Pipe Insulation Rebates

- $4.00/lf - 2" Pipe insulation; low pressure (≤ 15 psig) **steam** application: 200 - 250 degrees F steam
- $3.00/lf - 2" Pipe insulation; hot water application: 120 - 200 degrees F

G-I. Tank Insulation Rebates

1" or 2" of fiber glass or foam insulation must be added to existing bare liquid or solution storage or transfer tanks that are coupled to gas-fired commercial or industrial equipment that transfers heat to the liquid or solution. The insulation thickness and tank solution temperature will determine the rebate amount. Additional required information will be the manufacturer's name, insulation material type, and the material k-value rating. The applicant will need to fill out the "Tank Insulation" worksheet "?"on the application in order to be considered for the rebate.

1" Tank Insulation Rebates

- $3.00/sq ft- 1" Tank insulation, high temperature application: 170 – 200 degrees F solution
- $2.00/sq ft- 1" Tank insulation, low temperature application: 120 – 170 degrees F solution

2" Tank Insulation Rebates

- $4.00/sq ft- 2" Tank insulation, high temperature application: 170 – 200 degrees F solution
- $3.00/sq ft- 2" Tank insulation, low temperature application: 120 – 170 degrees F solution

G-J. Residential High Efficiency Clothes-Washer Used In A Business (Not For Commercial Coin Operated Usage)

Rebate is for a high efficiency **residential** washer used at a business for onsite/in-house laundry, e.g. beauty parlor, barbers shop, etc. (Commercial coin operated equipment does not qualify)

Qualifying Level 1- Residential clothes washers must have a Modified Energy Factor* (MEF) of 1.60 to 1.79 and a Water Factor** (WF) of 8.5 to 5.6. Not all ENERGY STAR qualified residential clothes washers qualify for this rebate. Qualifying Level 1 residential clothes washers may be viewed at http://www.cee1.org/resid/seha/rwsh/rwsh-prod.pdf , Tier 2 and 3A.

Qualifying Level 2- Residential clothes washers must have a Modified Energy Factor* (MEF) of 1.80 or greater and a Water Factor** (WF) of 5.5 or less. Not all ENERGY STAR qualified clothes washers qualify for this rebate. Qualifying Level 2 residential clothes washers may be viewed at http://www.cee1.org/resid/seha/rwsh/rwsh-prod.pdf , Tier 3B.

* Modified Energy Factor (MEF) measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

** Water Factor (WF) represents the number of gallons of water needed for each cubic foot of laundry. The lower number indicates lower consumption and more efficient use of water.

G-K. Greenhouse Heat Curtains

Only installations of interior curtains for heat retention in existing gas-heated greenhouses qualify. The rebate applies to new and retrofit curtain system installations in existing greenhouses for specific agricultural end-use. The agricultural uses include horticultural specialties such as ornamental floriculture, nursery products and food crops grown under cover (NAICS 1114) and landscape and horticultural services (NAICS 541 & 561) which store agricultural products under cover. Product must be designed by the manufacturer to be a heat curtain, and the installation must have the ability to automatically or manually move the curtain into place. Curtain must be located such that the gas heat source provides hot air to conditioned space bounded by the curtain. Curtain material must have an Energy Savings rating of ≥ 40%, and must have a warranty/product life of 5 years. Include a manufacturer's specification sheet documenting type of curtain. Rebate amount is for square foot of curtain material.

G-L. Infrared Film for Greenhouses

Installations of single sheet infrared anti-condensate polyethylene plastic with a minimum 6 mil. thickness for heat retention on existing heated greenhouses will qualify. Greenhouses must be for agriculture and floriculture uses (NAICS 1114), as well as landscape and horticultural services (NAICS 541 & 561). A manufacturers specification sheet must be included.

Table 1. Storage Water Heater

Input Rating	Required Efficiency
≤ 75,000 Btuh	Energy Factor ≥ 0.62
>75,000 Btuh	Thermal Efficiency ≥ 82%

Table 2. Space Heating Boiler

Type	Input Rating	Required Efficiency
Steam	< 300 MBtuh	AFUE ≥ 77%
Small water	< 300 MBtuh	AFUE ≥ 82%
Large	≥ 300 MBtuh - < 2,500 MBtuh	Thermal Efficiency ≥ 84%

Table 3. Instantaneous Water Heater (Non-Process Related)

Input Rating	Required Efficiency
≤ 200 MBtuh	Energy Factor ≥ 0.63
> 200 MBtuh	Thermal Efficiency ≥ 82%

Table 4. Direct Contact Water Heater (Non-Process Related)

Input Rating	Required Efficiency
≤ 300,000 MBtuh	AFUE ≥ 88%
> 300,000 MBtuh	Thermal Efficiency > 90%

For each table, all required efficiencies must exceed Title 20 & 24 standards, as prescribed above.

DEFINITIONS:

Annual Fuel Utilization Efficiency (AFUE): the ratio of annual output energy to annual input energy.
Combustion Efficiency (CE): 100 times (1 - energy lost to flue) divided by input energy.
Thermal Efficiency (TE): 100 times useful energy output divided by input energy.

F. Process Boiler/Direct Contact Water Heater		
Efficiency Rating %		
Schedule Usage		
Hours/Day	Days/Week	Weeks/Yr

I. Pipe Insulation (non-space conditioning)		
Schedule Usage		
Hours/Day	Days/Week	Weeks/Yr
R-Value of Insulation		
End Use (Select One) □ Hot Water □ Steam □ Oil		
Nominal Pipe Diameter (in)		
Insulation Thickness (in)		

J. Tank Insulation		
Schedule Usage		
Hours/Day	Days/Week	Weeks/Yr
R-Value of Insulation		
Solution Temperature (° F)		
Insulation Thickness (in)		