

## Commercial Combination Ovens

**Electric Combination Ovens:** The electric combination oven/steamer must have a tested steam mode cooking energy efficiency of  $\geq 50\%$  and convection mode cooking energy efficiency of  $\geq 70\%$  utilizing American Society for Testing and Materials (ASTM) Standard F2861, and meet the idle rate requirements in Table 1.

**Gas Combination Ovens:** The gas combination oven/steamer must have a tested steam mode cooking energy efficiency of  $\geq 38\%$  and convection mode cooking energy efficiency of  $\geq 44\%$  utilizing American Society for Testing and Materials (ASTM) Standard F2861, and meet the idle rate requirements in Table 1.

**Table 1 ASTM F2861 Idle Rate Requirements for Commercial Combination Oven/Steamers.**

Combi Oven Type	Steam Mode Idle Energy Rate	Convection Mode Idle Energy Rate
Electric Combi < 15 pan capacity*	$\leq 5.0$ kW	$\leq 2.0$ kW
Electric Combi 15–28 pan capacity*	$\leq 6.0$ kW	$\leq 2.5$ kW
Electric Combi > 28 pan capacity*	$\leq 9.0$ kW	$\leq 3.5$ kW
Gas Combi < 15 pan capacity*	$\leq 15,000$ Btu/h	$\leq 9,000$ Btu/h
Gas Combi 15–28 pan capacity*	$\leq 18,000$ Btu/h	$\leq 11,000$ Btu/h
Gas Combi > 28 pan capacity*	$\leq 28,000$ Btu/h	$\leq 17,000$ Btu/h

\*Combination oven/steamer pan capacity on based on the maximum capacity of full-size 2 ½-inch deep hotel pans. This must be consistent with the number of pans used to meet the energy-efficiency qualifications per ASTM F2861.

## Commercial Convection Ovens

**Electric Convection Ovens:** The full-size electric oven must have a tested heavy load potato cooking energy efficiency  $\geq 70\%$  and idle rate  $\leq 1.6$  kW utilizing ASTM Standard F1496. The half-size electric oven must have a tested heavy load potato cooking energy efficiency  $\geq 70\%$  and idle rate  $\leq 1.0$  kW utilizing ASTM Standard F1496.

**Gas Convection Ovens:** The full-size gas oven must have a tested heavy load cooking energy efficiency  $\geq 44\%$  and idle rate  $\leq 13,000$  Btu/h utilizing ASTM Standard F1496.

## Commercial Rack Ovens

**Gas Single Rack Oven:** The tested commercial rack oven must have a tested baking energy efficiency of  $\geq 50\%$  utilizing ASTM Standard F2093.

**Gas Double Rack Oven:** The tested commercial rack oven must have a tested baking energy efficiency of  $\geq 50\%$  utilizing ASTM Standard F2093.

## Commercial Conveyor Ovens

**Gas Conveyor Oven—Small:** The tested commercial conveyor oven must have a tested baking energy efficiency of  $\geq 42\%$  and have an idle energy rate of  $\leq 29,000$  Btu/h, utilizing ASTM Standard F1817. Multiple-deck oven configurations are paid per qualifying oven deck.

**Gas Conveyor Oven—Large:** The tested commercial conveyor oven must have a tested baking energy efficiency of  $\geq 42\%$  and have an idle energy rate of  $\leq 57,000$  Btu/h, utilizing ASTM Standard F1817. Multiple-deck oven configurations are paid per qualifying oven deck.

## Commercial Fryers

**Electric Fryers:** The commercial fryer must have a tested heavy load cooking energy efficiency of 80% utilizing ASTM Standard F1361. Multiple vat configurations are paid per qualifying vat.

**Gas Fryers:** The commercial fryer must have a tested heavy load cooking energy efficiency of 50% utilizing ASTM Standard F1361. Multiple vat configurations are paid per qualifying vat.

## Commercial Large Vat Fryers

**Electric Large Vat Fryers:** The commercial fryer must have a tested heavy-load (French fry) cooking energy efficiency of  $\geq 80\%$  utilizing ASTM Standard F2144. Multiple vat configurations are paid per qualifying vat.

**Gas Large Vat Fryers:** The commercial fryer must have a tested heavy-load (French fry) cooking energy efficiency of  $\geq 50\%$  utilizing ASTM Standard F2144. Multiple vat configurations are paid per qualifying vat.

## Commercial Griddles

**Electric Griddle:** The electric griddle must have a tested heavy load cooking energy efficiency of  $\geq 70\%$  and an idle energy rate  $\leq 355$  watts per ft<sup>2</sup> of cooking surface utilizing ASTM Standard F1275.

**Gas Griddle:** The tested griddle must have a tested heavy load cooking energy efficiency of  $\geq 38\%$  and an idle energy rate  $\leq 2,650$  Btu/h per ft<sup>2</sup> of cooking surface utilizing ASTM Standard F1275.

## Commercial Steam Cookers

**Electric Steam Cookers:** The commercial steam cooker must have a tested heavy load potato cooking energy efficiency of 50% utilizing ASTM Standard F1484.

**Gas Steam Cookers:** The commercial steam cooker must have a tested heavy load potato cooking energy efficiency of 38% utilizing ASTM Standard F1484.

## Commercial Solid Door Reach-in Refrigerators and Freezers

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. Qualifying models must be listed in the California Energy Commission database and must meet the energy efficiency specifications listed in Table 2. These specifications are also available at the [www.energystar.gov](http://www.energystar.gov) Web site.

**Table 2. Energy Efficiency Requirements for Commercial Solid Door Reach-In Freezers and Refrigerators.**

Measure Description	Qualifying Criteria (Energy Consumption Under Test Conditions)
Freezers $0 \leq V < 15 \text{ ft}^3$	$\leq 0.250 V + 1.25 \text{ kWh/day}$
Freezers $15 \leq V < 30 \text{ ft}^3$	$\leq 0.400 V - 1.000 \text{ kWh/day}$
Freezers $30 \leq V < 50 \text{ ft}^3$	$\leq 0.163 V + 6.125 \text{ kWh/day}$
Freezers $50 \leq V \text{ ft}^3$	$\leq 0.158 V + 6.333 \text{ kWh/day}$
Chest Freezers	$\leq 0.270 V + 0.130 \text{ kWh/day}$
Refrigerators $0 \leq V < 15 \text{ ft}^3$	$\leq 0.089 V + 1.411 \text{ kWh/day}$
Refrigerators $15 \leq V < 30 \text{ ft}^3$	$\leq 0.037 V + 2.200 \text{ kWh/day}$
Refrigerators $30 \leq V < 50 \text{ ft}^3$	$\leq 0.056 V + 1.635 \text{ kWh/day}$
Refrigerators $50 \leq V \text{ ft}^3$	$\leq 0.060 V + 1.416 \text{ kWh/day}$
Chest Refrigerators	$\leq 0.125 V + 0.475 \text{ kWh/day}$

Products are qualified using ASHRAE standard 72-2005 at  $0^\circ\text{F} \pm 2^\circ\text{F}$  for freezers and  $38^\circ\text{F} \pm 2^\circ\text{F}$  for refrigerators.

V = Internal volume in  $\text{ft}^3$

## Commercial Glass Door Reach-in Refrigerators and Freezers

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. Qualifying models must be listed in the California Energy Commission database and must meet the energy efficiency specifications listed in Table 3. These specifications are also available at the [www.energystar.gov](http://www.energystar.gov) Web site.

**Table 3. Energy Efficiency Requirements for Commercial Glass door Reach-In Refrigerators and Freezers.**

Measure Description	Qualifying Criteria (Energy Consumption Under Test Conditions)
Refrigerators $0 \leq V < 15 \text{ ft}^3$	$\leq 0.118 V + 1.382 \text{ kWh/day}$
Refrigerators $15 \leq V < 30 \text{ ft}^3$	$\leq 0.140 V + 1.050 \text{ kWh/day}$
Refrigerators $30 \leq V < 50 \text{ ft}^3$	$\leq 0.088 V + 2.625 \text{ kWh/day}$
Refrigerators $50 \leq V \text{ ft}^3$	$\leq 0.110 V + 1.500 \text{ kWh/day}$
Chest Refrigerators	$\leq 0.125 V + 0.475 \text{ kWh/day}$
Freezers $0 \leq V < 15 \text{ ft}^3$	$\leq 0.607 V + 0.893 \text{ kWh/day}$
Freezers $15 \leq V < 30 \text{ ft}^3$	$\leq 0.733 V - 1.00 \text{ kWh/day}$
Freezers $30 \leq V < 50 \text{ ft}^3$	$\leq 0.250 V + 13.50 \text{ kWh/day}$
Freezers $50 \leq V \text{ ft}^3$	$\leq 0.450 V + 3.50 \text{ kWh/day}$
Chest Refrigerators	$\leq 0.270 V + 0.130 \text{ kWh/day}$

Products are qualified using ASHRAE standard 72-2005 at  $38^\circ\text{F} \pm 2^\circ\text{F}$  for refrigerators and  $0^\circ\text{F} \pm 2^\circ\text{F}$  for freezers.

V = Internal volume in  $\text{ft}^3$

## Commercial Ice Makers

This specification covers machines generating 60 grams (2 oz.) or lighter ice cubes, as well as flaked, crushed, or fragmented ice machines that meet the Energy-Efficient Ice Maker energy efficiency thresholds by Ice harvest (IHR) rate listed in Table 4, or the Super-Efficient Ice Maker energy efficiency thresholds by Ice harvest (IHR) rate listed in Table 5. Only air cooled machines (icemaker heads, self-contained unites, and remote condensing units) are eligible. Performance data is based on ARI Standard 810. To qualify, the entire ARI tested Ice Making system must be purchased to qualify. Remote machines must be purchased with qualifying remote condenser or remote condenser/compressor unit.

**Table 4. Energy-Efficient Ice Maker Energy Efficiency Requirements.**

Equipment Type	Ice Harvest Rate (lbs ice/day)	Energy Use Limit (kWh/100 lbs ice)	Potable Water Use Limit (gal/100 lbs ice)
Ice Maker Head (IMH)	< 450	$9.23 - 0.0077 \times H^a$	$\leq 25$
	$\geq 450$	$6.20 - 0.0010 \times H^a$	$\leq 25$
Remote Condensing Unit (RCU) without remote compressor	< 1,000	$8.05 - 0.0035 \times H^a$	$\leq 25$
	$\geq 1,000$	4.64	$\leq 25$
Remote Condensing Unit (RCU) with remote compressor	< 934	$8.05 - 0.0035 \times H^a$	$\leq 25$
	$\geq 934$	4.82	$\leq 25$
Self Contained Unit (SCU)	< 175	$16.7 - 0.0436 \times H^a$	$\leq 35$
	$\geq 175$	9.11	$\leq 35$

<sup>a</sup> H = Ice Harvest Rate (IHR) for the commercial ice machine as determined by applying ARI Standard 810.

**Table 5. Super-Efficient Ice Maker Energy Efficiency Requirements.**

Equipment Type	Ice Harvest Rate (lbs ice/day)	Energy Use Limit (kWh/100 lbs ice)	Potable Water Use Limit (gal/100 lbs ice)
Ice Maker Head (IMH)	< 450	$8.72 - 0.0073 \times H^a$	$\leq 20$
	$\geq 450$	$5.86 - 0.0009 \times H^a$	$\leq 20$
Remote Condensing Unit (RCU) without remote compressor	< 1,000	$7.52 - 0.0032 \times H^a$	$\leq 20$
	$\geq 1,000$	4.34	$\leq 20$
Remote Condensing Unit (RCU) with remote compressor	< 934	$7.52 - 0.0032 \times H^a$	$\leq 20$
	$\geq 934$	4.51	$\leq 20$
Self Contained Unit (SCU)	< 175	$15.3 - 0.0399 \times H^a$	$\leq 30$
	$\geq 175$	8.33	$\leq 30$

<sup>a</sup> H = Ice Harvest Rate (IHR) for the commercial ice machine as determined by applying ARI Standard 810.

## Commercial Hot Food Holding Cabinets

This measure does not include cook and hold equipment. All measures must be electric hot food holding cabinets that are fully insulated and have solid doors. Qualifying cabinets must not exceed the maximum idle energy rate of 20 Watts per cubic foot in accordance with the ASTM Standard F2140 test method.

## Commercial Kitchen Demand Ventilation Control

**Retrofit Installation:** This incentive applies towards the purchase and installation of a new commercial kitchen exhaust hood control system installed in an existing dedicated commercial kitchen exhaust hood and make-up air system. The control system must be used in conjunction with variable speed fan motor controls. Project Installation Worksheet must be submitted with rebate application. Only pre-approved control systems will qualify for an incentive.

**New Installation:** This incentive applies towards the purchase and installation of a new commercial kitchen exhaust hood control system installed in a new dedicated commercial kitchen exhaust hood and make-up air system. The control system must be used in conjunction with variable speed fan motor controls. Project Installation Worksheet must be submitted with rebate application. Only pre-approved control systems will qualify for an incentive.