California Energy Commission

Conservation Division

Regulations for

Appliance Efficiency Standards,

Relating to

Refrigerators and Freezers

Room Air Conditioners

Central Air Conditioners

Gas Space Heaters

Water Heaters

Plumbing Fittings

Gas Clothes Dryers

and

Gas Cooking Appliances

Amended December 16, 1981

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CALIFORNIA ADMINISTRATIVE CODE

TITLE 20, CHAPTER 2

SUBCHAPTER 4: ENERGY CONSERVATION
ARTICLE 4: APPLIANCE EFFICIENCY STANDARDS

1601. Scope.

The provisions of this article shall apply to the testing, certification and enforcement of efficiency standards for the following types of new appliances sold in California:

(a) Refrigerators, refrigerator-freezers, and freezers which can be operated by alternating current electricity, excluding the following types:

- o those designed expressly for use in recreational vehicles and other mobile equipment
- o those with total refrigerated volume exceeding 39 cubic feet
- o those designed to be used without doors
- o those which do not include a compressor and condenser unit as an integral part of the cabinet assembly

(b) Room air conditioners, excluding the following types:

- o those installed in mobile homes at the time of construction
- o those designed expressly for use in recreational vehicles or other mobile equipment

(c) Central air conditioning heat pumps (regardless of capacity) and other central air conditioners with a cooling capacity of less than 65,000 Btu per hour, excluding the following types:

- o those installed in mobile homes at the time of construction
- o those designed expressly for use in recreational vehicles or other mobile equipment

Requirements for central air conditioning heat pumps with cooling capacity of 65,000 Btu per hour or more apply to heating performance but not cooling performance.

(d) Gas space heaters, excluding the following types:

- o gravity type central furnaces
- o heaters installed in mobile homes at the time of construction
- o heaters designed expressly for use in recreational vehicles or other mobile equipment
- o fan type central furnaces with input rates of 400,000 Btu per hour or more
- o infrared heaters

(e) Water heaters, excluding the following types:

- o nonstorage type electric water heaters
- o water heaters used exclusively for space heating
- o storage type water heaters installed in mobile homes at the time of construction
- o water heaters designed expressly for use in recreational vehicles or other mobile equipment

(f) Plumbing fittings, including showerheads, lavatory faucets and sink faucets.

The provisions of this article also restrict the sale of the following gas appliances if they are equipped with continuously burning pilots:

fan type central furnaces
fan type wall furnaces
clothes dryers
cooking appliances
swimming pool heaters

The provisions of this article shall not apply to new appliances manufactured in California, but sold outside the state, nor to new appliances manufactured outside California and sold wholesale in California for final retail sale outside the state. For purposes of these regulations, the sale of a building which contains a new, permanently installed appliance is not considered the sale of a new appliance.

1602. Definitions.

For the purpose of this article the following definitions shall apply:

(a) General.

(1) "Date of sale" means the day when the appliance is physically delivered to the buyer.

(2) "Manufacturer" means any person engaged in the original production or assembly of an appliance.

(b) Refrigerators and Freezers.

(1) "Automatic defrost system" means a defrost system in which the defrosting action for all refrigerated surfaces is initiated and terminated automatically.

(2) "Freezer" means a cabinet designed as a unit for the storage of food at temperatures of about 0° F, having the ability to freeze food, and having a source of refrigeration requiring an energy input.

(3) "Manual defrost system" means a defrost system in which the defrosting action for all refrigerated surfaces is initiated manually.

(4) "Partial automatic defrost system" means a defrost system in which the defrosting action for the refrigerated surfaces in the refrigerator compartment is initiated and terminated automatically and the defrosting action for the refrigerated surfaces in the freezer is initiated manually.

(5) "Refrigerator" means a cabinet designed for the refrigerated storage of food at temperatures above 32° F, and having a source of refrigeration requiring an energy input. It may include a compartment for the freezing and storage of food at temperatures below 32° F, but does not provide a separate low temperature compartment designed for the freezing of and the long-term storage of food at temperatures below 8° F. It has only one exterior door, but it may have interior doors on compartments.

(6) "Refrigerator-freezer" means a cabinet which consists of two or more compartments with at least one of the compartments designed for the refrigerated storage of foods at temperatures above 32° F, and with at least one of the compartments designed for the freezing of and the storage of frozen foods at temperatures of 8° F or below. The source of refrigeration requires energy input.

(7) "Upright freezer" means a freezer whose access door is at the front of the appliance.

(c) Air Conditioners.

(1) "Air conditioner" means one or more factory made assemblies which include an evaporator or cooling coil and an electrically driven compressor and condenser combination, and may include a heating function.

(2) "Central air conditioner" means an air conditioner which is not a room air conditioner.

(3) "Central air conditioning heat pump" means a central air conditioner which is capable of heating by refrigeration, and which may or may not include a capability for cooling.

(4) "Coefficient of Performance (COP)" of a heat pump means the ratio of the rate of useful heat output delivered by the complete heat pump unit (exclusive of supplementary heating) to the corresponding rate of energy input, in consistent units and under operating conditions specified in Section 1603(b) and (c) of these regulations. British thermal units shall be converted to kilowatt-hours at the rate of 3,412 British thermal units per kilowatt-hour.

(5) "Cooling capacity" means a measure of the ability of a unit to remove heat from an enclosed space under test conditions specified in Section 1603(b) and (c) of these regulations.

(6) "Energy efficiency ratio (EER)" and "seasonal energy efficiency ratio (SEER)" means the ratio of the cooling capacity of the air conditioner in British thermal units per hour, to the total electrical input in watts under test conditions specified in Section 1603(b) and (c) of these regulations.

(7) "Packaged terminal air conditioner" means a room air conditioner consisting of a factory-selected combination of heating and cooling components, assemblies or sections, intended to serve an individual room or zone and constructed in a manner which complies with the definition contained in the Standard for Packaged Terminal Air Conditioners approved by the American National Standards Institute on November 17, 1977, known as ANSI/ ARI 310-1976.

(8) "Room air conditioner" means a factory encased air conditioner designed as a unit for mounting in a window or through a wall, or as a console. It is designed for delivery of conditioned air to an enclosed space without ducts.

(9) "Room air conditioning heat pump" means a room air conditioner, which is capable of heating by refrigeration, and which may or may not include a capability for cooling.

(10) "Single package central air conditioner" means a central air conditioner which is not a split system central air conditioner.

(11) "Split system central air conditioner" means a central air conditioner consisting of two or more major components; a compressor-containing unit, normally installed outside the building, and a noncompressor-containing unit, normally installed within the building.

(d) Gas Space Heaters.

(1) "Boiler" means a space heater which is a self-contained appliance for supplying steam or hot water primarily intended for space heating application.

(2) "Central furnace" means a self-contained space heater designed to supply heated air through ducts of more than 10 inches length.

(3) "Duct heater or furnace" means a space heater designed to be installed within a duct.

(4) "Energy consumption during standby" means the energy consumed by the gas space heater when the main burner is not operating. It does not include energy consumption related to associated cooling equipment. It shall be reported in watts, based on a conversion factor of 3,412 British thermal units per kilowatt-hour.

(5) "Fan type heater or furnace" means a space heater that provides for the circulation of heated air at pressures other than atmospheric.

(6) "Floor heater or furnace" means a self-contained, floor mounted space heater without ducts.

(7) "Gravity type heater or furnace" means a space heater which provides for circulation of heated air through the differential densities of the heated air and the nonheated air.

(8) "Infrared heater" means a space heater which directs a substantial amount of its energy output in the form of infrared energy into the area to be heated.

(9) "Room heater" means a free-standing nonrecessed space heater.

(10) "Seasonal efficiency" or "steady state efficiency" or "thermal efficiency" of a space heater means a measure of the percentage of heat from the combustion of gas which is transferred to the space being heated under conditions specified in Section 1603 of these regulations.

(11) "Space heater" means an appliance that supplies heat to a space for the purpose of providing warmth to those objects within the space.

(12) "Unit heater" means a self-contained fan type heater designed to be installed within the heated space.

(13) "Wall heater or furnace" means a wall mounted, self-contained space heater without ducts that exceed 10 inches.

(e) Water Heaters.

(1) "Large storage-type water heater" means a storage-type water heater whose input rating exceeds 75,000 Btu per hour (gas) or 12 kilowatts (electric).

(2) "Mobile home storage-type water heater" means a storage-type water heater designed expressly for use in mobile homes.

(3) "Small storage-type water heater" means a storage-type water heater whose input rating does not exceed 75,000 Btu per hour (gas), or 12 kilowatts (electric).

(4) "Standby loss of a storage-type water heater" when expressed as a percent means the ratio of heat lost per hour to the heat content of the stored water above room temperature. "Standby loss of a storage-type water heater" when expressed in watts per square foot means the heat lost per hour, per square foot of tank surface area.

(5) "Storage-type water heater" means a water heater that heats and stores water within the appliance at a thermostatically controlled temperature for delivery on demand.

(6) "Swimming pool heater" means a water heater designed for heating nonpotable water at atmospheric pressure, such as water in swimming pools, therapeutic pools, and similar applications.

(7) "Thermal efficiency" or "recovery efficiency" of a water heater means a measure of the percentage of heat from the combustion of gas which is transferred to the water as measured under test conditions specified in Section 1603 of these regulations.

(8) "Water heater" means an appliance for supplying hot water for purposes other than space heating.

(f) Plumbing Fittings.

(1) "Lavatory faucet" means a plumbing fitting designed for discharge into a lavatory.

(2) "Plumbing fitting" means a device designed to control and/or guide the flow of water into or convey water from a fixture.

(3) "Showerhead" means a device through which water is discharged for a shower bath.

(4) "Sink faucet" means a plumbing fitting designed for discharge into a sink. "Sink faucet" does not include utility faucets designed for use with service sinks.

(g) "Gas clothes dryer" means a device used to dry wet laundry by means of heat derived from the combustion of fuel gases.

(h) "Household cooking gas appliance" means a gas appliance for domestic food preparation, providing at least top or surface cooking, oven cooking, or broiling.

1603. Test Methods.

(a) Refrigerators and Freezers. The manufacturer shall cause the testing of samples of each model of refrigerator, refrigerator-freezer and freezer, to be sold in California.

(1) The method of sampling of refrigerators, refrigerator-freezers and freezers shall be that required by the Department of Energy and found in 44 Federal Register 22410-22418 (April 13, 1979).

(2) Fresh food refrigerated volume, freezer refrigerated volume, and total refrigerated volume shall be determined using the American National Standard Methods of Testing for Household Refrigerators, Combination Refrigerator-Freezers and Household Freezers, known as ANSI/AHAM HRF-1-1979.

(3) The energy consumption and energy factor shall be determined using the test procedure required by the Department of Energy and found in 42 Federal Register 46140-46151 (September 14, 1977).

(4) When manually operated anti-sweat heater switches are provided, the values of energy consumption shall be determined with these switches set at their highest energy consuming position, and with these switches set at their lowest energy consuming position.

(5) When a refrigerator, refrigerator-freezer or freezer can be operated using either alternating current electricity or one or more other sources of primary power, the test shall be performed using alternating current electricity only.

(b) Room Air Conditioners. The manufacturer shall cause the testing of samples of each model of room air conditioner and room air conditioning heat pump to be sold in California.

(1) The method of sampling of room air conditioners shall be that required by the Department of Energy and found in 44 Federal Register 22410-22418 (April 13, 1979).

(2) The cooling capacity, heating capacity, electrical input and energy efficiency ratio (EER) of packaged terminal air conditioners shall be determined using the test procedure approved by the American National Standards Institute on November 17, 1977, known as ANSI/ARI 310-1976 or the test procedure approved by the Air-Conditioning and Refrigeration Institute in 1978, known as ARI 380/78. The cooling capacity, heating capacity, electrical input and energy efficiency ratio (EER) of all other room air conditioners and room air conditioning heat pumps shall be determined using the standard for room air conditioners, approved by the American National Standards Institute, on December 21, 1972, known as ANSI/AHAM RAC-1, with ASHRAE 58-74 used in lieu of ASHRAE 58-65.

(3) The thermal efficiency of room air conditioners with heating capability shall be determined by dividing the heating capacity by the electrical input in equivalent units.

(c) Central Air Conditioners. The manufacturer shall cause the testing of samples of each model of central air conditioner and central air conditioning heat pump to be sold in California.

(1) For heat pumps and water cooled air conditioners, the method of sampling shall be that used by the Air-Conditioning and Refrigeration Institute in its certification program. The cooling capacity, heating capacity, electrical input, energy efficiency ratio and coefficient of performance shall be determined using one of the test procedures approved by the Air-Conditioning and Refrigeration Institute or American Society of Heating, Refrigerating and Air-Conditioning Engineers on the dates shown in Table C-1 and known by the numbers shown.

TABLE C-1

Appliance Type	Number	Date of Approval
Central air conditioning heat pumps with capacity less than 135,000 Btu/hr.	ARI 240-81 ARI 320-81	1981 1981
Other heat pumps.	ANSI/ASHRAE 90A-1980	1980
Water cooled central air conditioners	ARI 210-81	1981

The standby electrical input of air-cooled central air conditioning heat pumps shall be determined by measuring the watt-hours used in a one-hour period, at 75°F plus or minus 10°F ambient conditions, starting from a cold start. The adjusted coefficient of performance shall be calculated as follows:

$$\text{Adjusted Coefficient of Performance} = \frac{\text{Rated heating capacity (watts)}}{\text{Rated electrical input (watts)} + \left[c \times \text{standby electrical input (watts)} \right]}$$

Where c = 2.5 for 47°F test and c = 0 for 17°F test.

(2) For all other central air conditioners, the method of sampling and method of calculating cooling capacity, electrical input and seasonal energy efficiency ratio shall be that required by the Department of Energy and found in 44 Federal Register 76700-76723 (December 27, 1979.)

(3) A split system central air conditioner, or a compressor-containing unit, may be sold if, and only if, the manufacturer has certified that the compressor-containing unit, when tested with the noncompressor-containing unit most likely to represent the highest national sales volume, is in compliance with the provisions of this article.

(d) Gas Space Heaters. The manufacturer shall cause the testing of samples of each model of gas space heater to be sold in California.

(1) The method of sampling for gas fan type central furnaces when being tested for the steady state efficiency (for the 1979 and 1980 standards) shall be that used by the American Gas Association Laboratories in its certification program. The steady state efficiency of gas fan type central furnaces shall be determined using the test procedure required by the Department of Energy and found in 43 Federal Register 20147-20181 (May 10, 1978).

(2) The method of sampling of gas fan type central furnaces, when being tested for the seasonal efficiency (for the 1982 and 1984 standards), shall be that required by the Department of Energy and found in 44 Federal Register 22410-22418 (April 13, 1979).

The seasonal efficiency of gas fan type central furnaces shall be calculated using the following formula:

$$\text{Seasonal Efficiency} = \frac{\left[\text{annual fuel energy consumption (Btu)} \times \text{annual fuel utilization efficiency}\right] + \left[\text{annual auxiliary electrical energy consumption which provides heat to heated space (kWh)} \times \frac{3{,}412 \text{ Btu}}{\text{kWh}}\right]}{\text{annual fuel energy consumption (Btu)} + \left[\text{total annual auxiliary electrical energy consumption (kWh)} \times \frac{10{,}236 \text{ Btu}}{\text{kWh}}\right]}$$

The annual fuel energy consumption, annual auxiliary electrical energy consumption which provides heat to the heated space, total annual auxiliary electrical energy consumption and annual fuel utilization efficiency of gas fan type central furnaces shall be determined using the test procedure required by the Department of Energy and found in 43 Federal Register 20147 - 20181 (May 10, 1978).

(3) The method of sampling all other gas space heaters shall be that used by the American Gas Association Laboratories in its certification program.

Thermal efficiency and energy consumption during standby shall be measured using one of the test procedures approved by the American National Standards Institute on the dates shown in Table D-1 and known by the numbers shown.

TABLE D-1

Number	Date of Approval
Z21.11.1 - 1977	August 2, 1977
Z21.13 - 1977	1977
Z21.44 - 1977	January 20, 1977
Z21.48 - 1979	April 30, 1979
Z21.49 - 1979	April 30, 1979
Z83.8 - 1978	May 19, 1978
Z83.9 - 1980	January 14, 1980

(e) Water Heaters. The manufacturer shall cause the testing of samples of each model of water heater to be sold in California.

(1) The method of sampling of small storage type water heaters except mobile home storage type water heaters, shall be that required by the Department of Energy and found in 44 Federal Register 22410-22418 (April 13, 1979). The recovery efficiency, standby loss and storage capacity shall be measured using the test procedure required by the Department of Energy and found in 42 Federal Register 54110-54119 (October 4, 1977).

(2) The method of sampling for all other water heaters shall be that used by the American Gas Association Laboratories in its certification program. The recovery efficiency, standby loss and storage capacity (where applicable) shall be measured using one of the test procedures approved by the American National Standards Institute on the dates shown in Table E-1 and known by the numbers shown.

TABLE E-1

Appliance Type	Number	Date of Approval
Electric types		
large	C72.1 - 1972	March 16, 1972
mobile home	C72.1 - 1972	March 16, 1972
Gas types	Z21.10.1 - 1981	May 12, 1981
	Z21.10.3 - 1981	May 12, 1981
	Z21.13 - 1974	August 12, 1974
Swimming pool heaters	Z21.56 - 1979	December 11, 1979

Junction box equipment shall be bypassed during performance of the standby loss test.

(f) Plumbing Fittings. The manufacturer shall cause the testing of samples of each model of showerhead, lavatory faucet and sink faucet to be sold in California. The method of testing shall be that approved by the American National Standards Institute on November 16, 1979 and known as ANSI A112.18.1M-1979.

1604. Efficiency Standards.

(a) Refrigerators and Freezers. The energy consumption of all new refrigerators, refrigerator-freezers and freezers manufactured on or after the date specified in Table A shall be certified not to exceed the values derived from the appropriate formulae where V is the total refrigerated volume (cubic feet)and EC is the energy consumption (kWh per year). Energy consumption shall be based on the anti-sweat heaters operating half the time.

TABLE A

Effective Date	Appliance	Formula
November 3, 1979	Refrigerators	EC = 487 + 30.42V
	Refrigerator-freezers	
	with automatic defrost systems	
	. with anti-sweat heater switch	EC = 487 + 55V
	. without anti-sweat heater switch	EC = 487 + 60.83V
	all others	EC = 487 + 48.67V
	Upright Freezers	
	with automatic defrost systems	
	. with anti-sweat heater switch	EC = 460 + 65V
	. without anti-sweat heater switch	EC = 460 + 68.94V
	all others	EC = 460 + 45.96V
	Other Freezers	EC = 379 + 37.85V

(b) Room Air Conditioners. The energy efficiency ratio and thermal efficiency (where applicable) of all new room air conditioners manufactured on or after the date specified in Table B shall be certified to be not less than the values shown. The energy efficiency ratio of room air conditioners, labeled for use at more than one voltage shall be certified not to be less than the values shown at each of the labeled voltages.

TABLE B

Effective Date	Appliance	EER	Thermal Efficiency
December 22, 1978	Room air conditioners		
	. those with heating capability		90%
November 3, 1979	Room air conditioners		
	. those designed for use with a supply of at least 200 volts	8.2	
	. other heat pumps	8.3	
	. all other room air conditioners	8.7	

(c) Central Air Conditioners. The energy efficiency ratio or seasonal energy efficiency ratio of all new central air conditioners manufactured on or after the date specified in Table C-2 shall be certified to be not less than the values shown. The energy efficiency ratio or seasonal energy efficiency ratio of central air conditioners labeled for use at more than one voltage shall be certified not to be less than the values shown at each of the labeled voltages.

TABLE C-2

Effective Date	Appliance	Energy Efficiency Ratio	Seasonal Energy Efficiency Ratio
December 22, 1980	Central air conditioners		
	heat pumps	7.5	-
	water cooled air conditioners	8.0	-
	all others	-	8.0
April 1, 1982	Central air conditioners		
	water source heat pumps	7.5	-
	air source heat pumps	7.5	7.5
	other water cooled air conditioners	8.0	-
	other air cooled air conditioners	-	8.0

The adjusted coefficient of performance of all new central air conditioning heat pumps manufactured on or after the dates specified in Table C-3 shall be certified not to be less than the values shown. The adjusted coefficient of performance of central air conditioners labeled for use at more than one voltage shall be certified not to be less than the values shown at each of the labeled voltages.

TABLE C-3

Effective Date	Appliance	Adjusted Coefficient of Performance Air Source		Coefficient of Performance Water Source
		47° outdoor temp.	17° outdoor temp.	
November 3, 1979	Central air conditioning heat pumps	2.5	1.5	2.5

(d) Gas Space Heaters (1) The steady state efficiency and seasonal efficiency of all new fan type gas central furnaces manufactured on or after the dates specified in Table D-2 shall be certified not to be less than the values shown and the energy consumption during standby shall be certified not to exceed the values shown.

TABLE D-2

Effective Date	Appliance	Steady State Efficiency	Energy Consumption During Standby	Seasonal Efficiency
		Basic Standard		
June 22, 1979	Gas fan type central furnaces with input rate less than 175,000 Btu per hour, except for those combined with a single package central air conditioner with rated cooling capacity exceeding 65,000 Btu per hour.	75%	25 watts*	No requirement
		Alternative standard at manufacturer's option		
		No requirement	No requirement	71%
		Basic Standard		
Dec. 22, 1980	Gas fan type central furnaces with input rate of 175,000 Btu per hour or more and those combined with a single package central air conditioner with rated cooling capacity exceeding 65,000 Btu per hour.	75%	25 watts*	No requirement
		Alternative standard at manufacturer's option		
		No requirement	No requirement	71%
Dec. 22, 1982	Gas fan type central furnaces with input rate less than 175,000 Btu per hour, except those combined with a single package central air conditioner with rated cooling capacity exceeding 65,000 Btu per hour.	No requirement	No requirement	71%
Dec. 22, 1984	Gas fan type central furnaces with input rate of 175,000 Btu per hour or more and those combined with a single package central air conditioner with rated cooling capacity exceeding 65,000 Btu per hour.	No requirement	No requirement	71%

*For space heaters designed expressly for use with liquefied petroleum gases including propane, the maximum energy consumption during standby shall not exceed 147 watts.

(2) The thermal efficiency of all other new gas space heaters manufactured on or after the date specified in Table D-3 shall be certified not to be less than the values shown, and the energy consumption during standby (with the exception noted below) shall be certified not to exceed the values shown.

TABLE D-3

Effective Date	Appliance	Energy Consumption During Standby	Thermal Efficiency
December 22, 1978	Gas space heaters		
	Wall,		
	fan type	10 watts*	77%
	gravity type	147 watts	70%
	Floor,		
	fan type	10 watts*	70%
	gravity type	147 watts	65%
	Room with capacity		
	over 20,000 Btu/hour	147 watts	70%
	others	147 watts	65%
	Boilers	147 watts	75%
December 22, 1980	Unit	10 watts*	77%
	Duct	10 watts*	77%
December 22, 1981	Wall, fan type	10 watts*	80%
December 22, 1983	Unit	10 watts*	80%
	Duct	10 watts*	80%

*For space heaters designed expressly for use with liquefied petroleum gases including propane, the maximum energy consumption during standby shall not exceed 147 watts.

(e) Water Heaters. The recovery efficiency or thermal efficiency (as applicable) of all new water heaters manufactured on or after the date specified in Table E-2 shall be certified to be not less than the values shown and the standby loss shall be certified not to exceed the values shown.

TABLE E-2

Effective Date	Appliance	Standby Loss	Recovery Efficiency or Thermal Efficiency
December 22, 1979	Water heaters		
	Electric, mobile home storage type	4 watts per square foot	no requirement
	Electric, all other storage type	35 watts or 4 watts per square foot, whichever is larger	no requirement
	Gas, mobile home with storage capacity of		
	less than 25 gallons	7.5 percent	75 percent
	25 up to 35 gallons	7.0 percent	75 percent
	35 gallons or more	6.0 percent	75 percent
	Gas, small storage type, other than mobile home type (basic standard)	2.3 + $\frac{67}{Cap}$ percent	76 percent
	(alternative standard at manufacturer's option)	1.3 + $\frac{67}{Cap}$ percent	74 percent
	Gas, all others except swimming pool heaters	no requirement	75 percent
May 21, 1981	Gas, large storage type	2.3 + $\frac{67}{Cap}$ percent	75 percent
January 1, 1982	Fossil fueled swimming pool heaters	no requirement	75 percent

Where Cap is the storage capacity in gallons.

(f) Plumbing Fittings. The maximum flow rate of all new showerheads, lavatory faucets, and sink faucets shall not exceed the values specified in the standard approved by the American National Standards Institute on November 16, 1979 and known as ANSI A112.18.1M-1979.

1605. Continuously Burning Pilots.

New gas appliances of the following types shall not be sold or offered for sale if they are equipped with continuously burning pilots:

Fan type central furnaces
Household cooking appliances
Residential type clothes dryers
Fan type wall furnaces

This restriction shall not apply to:

Appliances designed to burn only liquefied petroleum gases
Appliances designed expressly for use in mobile homes and recreational vehicles
Cooking appliances which do not have an electrical line voltage supply connection and have three or less continuously burning pilots

Commencing 24 months after the certification of the first swimming pool heater with an intermittent ignition device, this restriction shall also apply to swimming pool heaters, including those designed to burn only liquefied petroleum gases.

1606. Certification.

(a) No new appliance described in Subsections 1601(a) through (f) of these regulations may be sold or offered for sale in California on or after the effective dates listed in Section 1604 of these regulations unless the manufacturer has provided sufficient information about the model number or other identification by which the date of manufacture can be readily ascertained.

(b) No new appliance described in Subsections 1601(a) through (f) of these regulations which was manufactured on or after the effective dates listed in Section 1604 of these regulations, shall be sold or offered for sale in California, which is not certified by its manufacturer to be in compliance with the provisions of this article. One year after such effective date, no new appliance described in Subsections 1601(a) through (f) of these regulations, regardless of the date of manufacture, may be sold or offered for sale in California, which is not certified by its manufacturer to be in compliance with the provisions of this article.

(c) The manufacturer shall submit a certification statement to the executive director for each model, containing the following information, except as provided in Subsection (d):

(1) Name and address of manufacturer.

(2) Type of appliance.

(3) Brand name.

(4) Model number, as it appears on the appliance name plate.

(5) Name and address of laboratory where test for efficiency was performed.

(6) Date of test for efficiency.

(7) Results of the test for efficiency as follows:

(A) Refrigerators and Freezers.

1.Energy consumption with anti-sweat heater switches on (kilowatt-hours per year).

2. Energy consumption with anti-sweat heater switches off (kilowatt-hours per year).

3. Mean of items 1 and 2.

4. Fresh food refrigerated volume (cubic feet).

5. Freezer refrigerated volume (cubic feet).

6. Total refrigerated volume (cubic feet).

(B) Room Air Conditioners.

1. Type (heating and cooling or cooling only).

2. Test procedure used.

3. Voltage.

4. Cooling capacity (Btu per hour).

5. Power input, while cooling (watts).

6. Energy efficiency ratio (Btu per watt-hour).

7. Heating capacity (Btu per hour).

8. Power input, while heating (watts).

9. Thermal efficiency (percent)

(C) Central Air Conditioners. Information on form entitled Central Air Conditioner, Central Furnace and Central Heat Pump Certification Form. Such form may be modified from time-to-time.

(D) Gas Space Heaters.

1. Steady state efficiency (of central fan type furnaces in percent).

2. Seasonal efficiency and components thereof (of central fan type furnaces in percent).

3. Thermal efficiency (of all gas space heaters except central fan type furnaces).

4. Energy consumption during standby (of all gas space heaters).

(E) Water Heaters.

1. Tank surface area (of electric water heaters).

2. Description of method of calculating tank surface area (of electric water heaters).

3. Recovery efficiency (percent).

4. Standby loss (percent).

5. Standby loss (watts and watts per square foot).

(F) Plumbing Fittings.

1. Maximum flow rate (showerheads at 20-45 psig).

2. Maximum flow rate (showerheads at 45-80 psig).

3. Maximum flow rate (lavatory faucets and sink faucets at 20-80 psig).

(8) Sufficient information about the model number or other identification by which the date of manufacture can be readily ascertained.

(9) A declaration that the appliance model complies with Article 4, Subchapter 4, of Title 20, of the California Administrative Code.

(d) In lieu of submitting to the Commission the detailed information specified in Subsection 1606(c), the manufacturer may submit the same or similar information to an industry or governmental certification agency, provided that the certifying agency meets the requirements specified by the Executive Director. The criteria specified by the Executive Director shall be presented for approval to the Commission after public notice of not less than 30 days.

When certifying the efficiency of gas appliances designed expressly for use in mobile homes, the manufacturer may, in place of information described in Subsection (c)(7), provide a statement from a nationally recognized testing laboratory that the appliance complies with the minimum efficiency requirement of the Department of Housing and Urban Development for appliances in mobile homes.

(e) Every certification statement shall be dated and signed by the manufacturer attesting to its truth and accuracy under penalty of perjury. Where the manufacturer is either a corporation or a business association, the certification statement shall be dated, signed and attested to by an officer thereof.

(f) Within 45 days after receipt of a certification statement, the executive director shall forward to the manufacturer, an acknowledgement that the statement has been received and that it is complete and accurate on its face.

For purposes of Subsection (b), certification of a model shall be deemed to occur upon forwarding of the acknowledgement by the executive director. If acknowledgement is not forwarded in a timely manner, certification shall be deemed to occur on the 45th day after receipt of the certification statement.

1607. Identification of Complying Appliances.

(a) Sufficient information shall be shown on the outside of the shipping carton for any appliance described in Subsections 1601(a) through 1601(f) (and unit carton in the case of plumbing fittings) to permit the determination of whether the appliance complies with the requirements of this article.

(b) The executive director or his designee may require specific information if necessary to permit determination of compliance.

(c) The manufacturer's name or brand name shall appear on each appliance.

1608. Enforcement.

(a) Notwithstanding the provisions of Section 1606 of these regulations, the executive director shall have authority to challenge the efficiency test results provided by the manufacturer and cause the appliance model to be retested at any voltage for which it is labeled.

(b) The executive director shall cause periodic inspections to be made of manufacturers, distributors or retailers of the new appliances described in Section 1601 of these regulations, including appliances that have been or are to be installed by contractors or builders at building sites, in order to determine their compliance with this article.

(c) The test would involve one unit selected by the executive director.

(1) If the performance of the appliance falls within the tolerances listed below, no further action is necessary, and the Commission will pay the cost of testing.

Appliance	Characteristic	Tolerance Limits (percent of certified value)
Refrigerators Refrigerator-Freezers Freezers	Volume	Not less than 98.5 percent
	Energy consumption	Not more than 110 percent
Room air conditioners (including heat pumps and packaged terminal air conditioners)	Cooling capacity	Not less than 95 percent
	Energy consumption when cooling	Not more than 110 percent
	Heating capacity	Not less than 95 percent
	Energy consumption when heating	Not more than 110 percent
Central air conditioners (including heat pumps)	Cooling capacity	Not less than 95 percent
	Energy efficiency ratio	Not less than 95 percent
	Seasonal energy efficiency ratio	Not less than 95 percent
Central air conditioning heat pumps, when heating	Heating capacity	Not less than 95 percent
	Coefficient of performance	Not less than 95 percent
	Heating seasonal performance factor	Not less than 95 percent
Central gas furnaces	Seasonal efficiency	Not less than 95 percent
	Steady state efficiency	Not less than 100 percent
All other gas space heaters	Thermal efficiency	Not less than 100 percent
	Energy consumption during standby	Not more than 100 percent
Small storage type water heaters	Recovery efficiency	Not less than 97.5 percent
	Standby loss	Not more than 115 percent
Other water heaters	Recovery efficiency	Not less than 100 percent
	Thermal efficiency	Not less than 100 percent
Plumbing fittings	Water flow rate	Not more than 110 percent

(2) If the performance of the appliance does not fall within the tolerances listed above, the manufacturer must pay the cost of testing and take whatever steps are necessary either to recertify the appliance at a lower efficiency rating or to provide information to the satisfaction of the executive director that:

(A) in the initial certification of the model, the method of selecting the test sample complied with the requirements of Section 1603 and

(B) in the initial certification of the model, the value certified was in conformance with the requirements of Section 1603.

Even if this information is provided, the manufacturer shall be required to test a second unit, selected by the executive director, in a laboratory acceptable to the executive director, at the manufacturer's expense.

(3) If the performance of that second unit described in subsection (c)(2) falls within the tolerances listed in Subsection (c)(1), no further action will be taken. If the performance of that second unit does not fall within those tolerances, the certification for that model shall be suspended by Commission order. The manufacturer may retest and recertify the model based on a new sample selected from his current production.

(4) If any of the tests of units required by the executive director pursuant to this subsection are not undertaken by a manufacturer, the certification for that model shall be suspended by Commission order.

(5) Prior to issuing an order suspending certification of any model the Commission shall hold hearings as may be authorized by California Administrative Code, Sections 1230 et seq.