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I. Legislative Criteria

Section 25402 (c) of the Public Resources Code has, since 1975, required the California Energy Commission (“Energy Commission”) to adopt standards for the energy efficiency of appliances whose use, as determined by the Energy Commission, requires a significant amount of energy on a statewide basis. New and upgraded standards must be feasible and attainable and must not “result in any added total costs to the consumer over the designed life of the appliance.” The added total cost is obtained by comparing the cost and performance of a typical model that the consumer would be expected to purchase with the proposed upgraded or new standard in effect, to the cost and performance of a typical model that the consumer would be expected to purchase without the proposed upgraded or new standard in effect.

II. Background

On December 15, 2004, the Energy Commission adopted numerous changes to the Appliance Efficiency Regulations. The five commissioners also signed an Order Adopting Regulations and Directing Additional Rulemaking Activities. The amended regulations were approved by the Office of Administrative Law on March 16, 2005, and took effect April 15, 2005.

III. Directives to the Efficiency Committee

The Order Adopting Regulations and Directing Additional Rulemaking Activities directed the Efficiency Committee, on December 15, 2004, to continue the rulemaking to consider at least the five issues listed in the Order, and take appropriate action thereon, as soon as possible. The directives to the Efficiency Committee are shown below, in italics.

1. Door Closers for Walk-In Refrigerators and Walk-In Freezers

Order Adopting Regulations Directive – Consider whether Section 1605.3(a)(4), requiring walk-in refrigerators and walk-in freezers, manufactured on or after January 1, 2006, to have automatic door closers, should be limited to (a) refrigerators and freezers no greater than a certain size, (b) with doors no greater than a certain size (e.g., 4 feet by 7 feet), or (c) other circumstances.

Section 1605.3(a)(4), currently requires walk-in refrigerators and walk-in freezers to have automatic door closers that firmly close walk-in doors that have been closed within one inch of full closure. Staff recognizes that this provision, as written, is not practical for doors of refrigerated warehouses that are designed for access by highway-type trucks, since manufacturers have indicated that automatic door closers do not have the ability to close doors of such size or

weight. However, they are practical for smaller pedestrian access doors in such warehouses.

Staff, therefore, recommends that the provisions be modified to refer to automatic door closers being required on doors no larger than four feet by seven feet.

See Table A-6 on page 4 of this document for specific wording of this provision.

2. Refrigerator Cabinets Specifically Designed to Display Bottled or Canned Beverages

Order Adopting Regulations Directive – Consider whether there should be an efficiency standard (or standards) for refrigerator cabinets specifically designed to display bottled or canned beverages, regardless of the presence or absence of doors and regardless of door type (see Section 1605.3(a)(5), Table A-6.

There is a class of refrigerators commonly located by checkout stands at supermarkets that are designed specifically for the display and sale of individual bottles and cans of beverages. The vast majority have sliding or hinged transparent doors. A newer design has no doors and is therefore inherently less efficient.

On December 15, 2004, the Energy Commission adopted standards for the beverage merchandiser models with doors but did not set a standard for those without doors. Staff recognizes that this action could possibly encourage the sale of door-less units. Discussions with manufacturers' representatives revealed that if the Energy Commission were to apply the same performance requirements levels for units without doors as are applied to units with doors, such levels could possibly be met by door-less units by 2010.

Because we do not currently have sufficient data to apply standards on door-less display cases, staff intends to further study this situation and gather more information from consultants and industry in order to formulate a reasonable yet energy-saving standard for this category of appliance in a future rulemaking.

As a result, we will not be adding standards for door-less beverage display cases in the current rulemaking.

3. Fan Motors Used in Walk-in Refrigerators and Walk-In Freezers

Order Adopting Regulations Directive – Consider whether there is evidence that sufficient equipment will not be available to meet the “electronically commutated evaporator fan motor” requirement of Section 1605.3(a)(4), and if so whether the standard should be modified, postponed, or eliminated.

On February 23, 2005, appliance program staff, appliance program standards consultants, and commercial refrigeration industry representatives came to a mutually-acceptable agreement on evaporator fan motor requirements for walk-in refrigeration units, resulting in a proposal to delay the requirement for electronically commutated evaporator fan motors. This compromise solution will still allow for significant energy savings for walk-in refrigeration equipment while giving industry a longer period to comply with more stringent standards for walk-in refrigeration equipment.

The proposed changes consist of delaying the requirement for using electronically commutated motors for walk-in refrigeration evaporator fans from January 1, 2006 to January 1, 2008, and allowing the use of permanent-split-capacitor motors in the interim between January 1, 2006 and January 1, 2008. The changes would also exclude efficiency requirements for motors operating at 460 volts or higher.

Changes would be made as indicated in the following text and a new table A-6.

Strike out *all* of current 1605.3(a)(4)(i) as indicated below and insert in its place:

1605.3(a)(4)(i) Energy Design Standards for Walk-In Refrigerators and Walk-In Freezers.

~~**All Walk-in Refrigerators and Walk-in Freezers.** Walk-in refrigerators and walk-in freezers that are manufactured on or after January 1, 2006 shall have:~~

- ~~(I) automatic door closers that firmly close all reach-in doors and that firmly close walk-in doors that have been closed to within one inch of full closure.~~
- ~~(II) envelope insulation of at least R-28 for refrigerators and R-36 for freezers;~~
- ~~(III) either electronically commutated evaporator fan motors, or evaporator fan motors of equivalent efficiency as determined by the executive director; and~~
- ~~(IV) for condenser fan motors of under one horsepower, either electronically commutated motors or other motor types with equivalent efficiency as determined by the Executive Director, or permanent split capacitor type motors, or polyphase motors larger than one-half (1/2) horsepower.~~

All Walk-in Refrigerators and Walk-in Freezers. Walk-in refrigerators and walk-in freezers manufactured on or after the effective dates shown in Table A-6, with the applicable motor types

shown in Table A-6, shall be manufactured with the required components shown in Table A-6.

Table A-6:
Energy Design Standards for Walk-In Refrigerators and Walk-In Freezers

<u>Motor Type</u>	<u>Effective Date</u>	<u>Required Components</u>
<u>All</u>	<u>January 1, 2006</u>	<u>Automatic door closers that firmly close all reach-in doors</u>
<u>All</u>	<u>January 1, 2006</u>	<u>Automatic door closers on all doors no wider than four foot or higher than seven foot, that firmly close walk-in doors that have been closed to within one inch of full closure</u>
<u>All</u>	<u>January 1, 2006</u>	<u>Envelope insulation > R-28 for refrigerators</u>
<u>All</u>	<u>January 1, 2006</u>	<u>Envelope insulation > R-36 for freezers</u>
<u>Condenser Fan Motors < 1 HP</u>	<u>January 1, 2006</u>	<u>(i) Electronically commutated motors, (ii) permanent split capacitor-type motors, (iii) polyphase motors > ½ HP, or (iv) motors of equivalent efficiency as determined by the Executive Director</u>
<u>Single-phase Evaporator Fan Motors < 1 HP and < 460 volts</u>	<u>January 1, 2006</u>	<u>(i) Electronically commutated motors or (ii) permanent split capacitor-type motors</u>
<u>Single-phase Evaporator Fan Motors < 1 HP and < 460 volts</u>	<u>January 1, 2008</u>	<u>Electronically commutated motors</u>

4. General Service Incandescent Lamps and Incandescent Reflector Lamps, Metal Halide Luminaires

Order Adopting Regulations Directive – Consider (a) whether there should be efficiency standards for full-spectrum or enhanced spectrum general service incandescent lamps, incandescent reflector lamps, and non-vertical metal halide luminaires (see 15-day language, Sections 1605.3(k)(2) & Table K-3, (k)(3) & Table K-4, and (n)(3) & Table N-1). And (b) whether there should be efficiency standards for general service incandescent lamps more stringent than those we [are] adopting today (see 15-Day Language, Section 1605.3(k)(2) & Table K-3)

The Energy Commission's December, 2004 15-Day Language included two possible sets of provisions for general service incandescent lamps and incandescent reflector lamps, one provision being less stringent than the other. The Energy Commission adopted the less stringent alternative. This will allow

more time for discussions with industry representatives regarding more stringent efficiency requirements. The main disagreement concerned the amount of savings that would occur as a result of the improvement of efficiency. If consumers continue to use light bulbs rated at 40, 60, 75, and 100 watts that have greater light output, the consumer will get more light output but use no less energy. It is therefore important that consumers should use bulbs with similar light output and reduced wattage. Staff and industry are thus coordinating on how best to inform the consumer on the greater importance of a lamp's light output rather than a lamp's wattage.

The Energy Commission's 15-Day Language also included two possible sets of provisions for metal halide luminaires, one set being less stringent than the other. The Energy Commission adopted the less stringent alternative. This will allow more time for discussions with industry representative about the provisions in the more stringent alternative. These discussions are currently taking place.

Staff is not recommending that the Commission include additional standards for the lamps and luminaires cited above during this rulemaking.

Staff is developing a proposal which will be the subject of another staff report to be released during a future rulemaking.

5. Marking and Data Reporting Provisions for Power Supplies, and Consumer Audio and Video Equipment

Order Adopting Regulations Directive – Consider whether there should be marking and data-reporting requirements for power supplies, and consumer audio and video equipment.

Data reporting requirements for external power supplies were considered for inclusion in the current proposed amendments to the regulations, but staff believes that more time is needed to ensure that the correct parameters are included in the data collection requirements.

As a result of this decision, a proposal for the data collection for external power supplies will be the subject of a separate staff report which will be released during a future rulemaking.

In order to ensure compliance with adopted standards, staff proposes that there be data reporting requirements for consumer audio and video equipment. Staff is proposing that Section 1606, Table V, Group U should be amended to add the following data collection items for Consumer Audio and Video Products.

1. All Appliances – Manufacturer name, Brand name, Model number, Regulatory Status

2. Compact Audio

- a. Power consumption in Audio standby-Passive Mode for models not having a permanently-illuminated clock display.
- b. Power consumption in Audio Standby-Passive Mode for models having a permanently-illuminated clock display.

3. Televisions – Power consumption in Standby-Passive Mode

4. DVD Players and DVD Recorders – Power consumption in Video Standby-Passive Mode

5. Digital Television Adapters

- a. Power consumption in Standby-Passive Mode
- b. Power consumption in On Mode

IV. Other Proposed Changes

Since the December 15, 2004 adoption, staff has identified several additional changes that need to be made to the regulations, most of which are corrections of editorial errors:

1. Updating References to Federal Standards, Test Methods, and Marking Requirements

All Sections - all the standards and test methods for federally regulated consumer products are set by the US Department of Energy and published in Title 10 of the Code of Federal Regulations (10 CFR). 10 CFR is updated annually. Staff recommends that 10 CFR (2004) be changed to 10 CFR (2005) throughout the Appliance Efficiency Regulations, in order to reference the most current standards and test methods cited in the latest release of the Code of Federal Regulations.

Additionally, federal marking requirements are contained in 16 CFR, which is also updated annually, and thus references to this code will also be updated in the regulations.

2. Calculations for Evaporative Cooler Provisions

Section 1604 (d), Table D includes the following wording related to the test method for evaporative coolers, which needs the small revision noted below to clarify its intent. The confusion is due to an inconsistency in the method of reporting saturation effectiveness and cooling effectiveness in the two ASHRAE test methods.

“ANSI/ASHRAE 133-2001 for packaged direct evaporative coolers and packaged indirect/direct evaporative coolers; ANSI/ASHRAE 143-2000 for packaged indirect evaporative coolers; with the following modifications for both test methods:

- (A) Saturation effectiveness and total power of direct evaporative coolers and cooling effectiveness and [fantotal](#) power of indirect evaporative coolers shall be measured at an airflow rate that corresponds to 0.3” external static pressure;
- (B) indoor dry bulb temperature shall be 80° F;
- (C) outdoor dry bulb temperature shall be 91° F;
- (D) outdoor wet bulb temperature shall be 69° F; and
- (E) Evaporative Cooler Efficiency Ratio (ECER) shall be calculated using the following formula:

$$ECER = 1.08 * (t_{in} - (t_{db} - \epsilon * (t_{db} - t_{wb}))) * Q / W$$

Where: t_{in} = indoor dry bulb temperature from (B)
 t_{db} = outdoor dry bulb temperature from (C)
 t_{wb} = outdoor wet bulb temperature from (D)
 ϵ = measured saturation effectiveness [divided by 100](#) or measured cooling effectiveness from (A)
 Q = measured air flow rate (cfm) from (A)
 W = measured [fantotal](#) power (Watts) from (A)

The effective date of this change would be January 1, 2006.

3. Standards for Commercial Ice Cream Freezers

Section 1605.3(a)(7) - The Energy Commission on December 15, 2004, adopted more stringent standards for freezers that take effect on January 1, 2007. These standards included different levels for those freezers that are ice cream freezers from those that are not ice cream freezers. In modifying Table A-6, the Energy Commission inadvertently deleted the standards for ice cream freezers that had been previously adopted in Table A-6 (which now becomes Table A-7). Staff recommends the following editorial correction to rectify this error:

Table A-67
**Standards for Reach-In Cabinets, Pass-Through Cabinets,
Roll-In Or Roll-Through Cabinets, Refrigerated Canned and Bottled
Beverage Vending Machines, and Wine Chillers that are Not Consumer
Products**

Appliance	Doors	Maximum Daily Energy Consumption (kWh)			
		March 1, 2003	August 1, 2004	January 1, 2006	January 1, 2007
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are refrigerators; and wine chillers that are not consumer products	Solid	0.125V + 4.22	0.125V + 2.76	0.10V + 2.04	0.10V + 2.04
	Transparent	0.172V + 5.78	0.172V + 4.77	0.172V + 4.77	0.12V + 3.34
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are freezers (except ice cream freezers)	Solid	0.398V + 2.83	0.398V + 2.28	0.40V + 1.38	0.40V + 1.38
	Transparent	0.940V + 5.10	0.940V + 5.10	0.940V + 5.10	0.75V + 4.10
Reach-in cabinets, pass-through cabinets, and roll-in or roll-through cabinets that are freezers that are ice cream freezers	Solid	<u>0.398V + 2.83</u>	<u>0.398V + 2.28</u>	<u>0.398V + 2.28</u>	0.39V + 0.82
	Transparent	<u>0.940V + 5.10</u>	<u>0.940V + 5.10</u>	<u>0.940V + 5.10</u>	0.88V + 0.33
Reach-in cabinets that are refrigerator-freezers and that have an adjusted volume (AV) of 5.19 ft ³ or greater	Solid	0.273AV + 2.63	0.273AV + 1.65	0.273AV + 1.65	0.27AV – 0.71
Reach-in cabinets that are refrigerator-freezers and that have an adjusted volume (AV) of less than 5.19 ft ³	<u>Solid or Transparent</u>			0.70	0.70

4. Reporting Provisions for Torchieres

Section 1606, Table V, Group N – To help ensure compliance with energy design standards currently in the Appliance Efficiency Regulations, data reporting

requirements for torchieres are being added to the regulations, with the following parameters being required to be reported:

- a. [Maximum possible electrical demand, all sockets, in Watts.](#)
- b. [Total number of lamp sockets](#)
- c. [Lamp type of primary upward-facing lamp\(s\) \(Permissible answers include screw-based incandescent, halogen, fluorescent pin-based, other\)](#)
- d. [Lamp type of side lamps \(Permissible answers include screw-based incandescent, halogen, fluorescent pin-based, other, none\)](#)
- e. [Method of insuring that power consumption of torchiere does not exceed 190 Watts \(Permissible answers include hard-wired ballast maximum, fused, reset-able circuit breaker \[current-limiting device\], thermal limit switch, other.](#)

The effective date of this change would be January 1, 2007.

5. [Reporting Provisions for Water Dispensers](#)

Section 1606, Table V, Group A requires reporting of “cooling capacity (gallons per hour)” and “base rate capacity” for all water dispensers. Base rate capacity is not an appropriate measure for some types of water dispensers. Staff recommends either the deletion of “base rate capacity” from Table V or require “base rate capacity” only if the water dispenser uses a precooler. Additionally, the choices for water dispenser “type” will be amended to include “point-of-use” water dispensers, and data collection for the existence of a refrigerated compartment will be added. The effective date of these changes would be January 1, 2006.

6. [Reporting Provisions for Metal Halide Luminaires](#)

Section 1606 of the adopted standards requires manufacturers of metal halide luminaires to file a statement for each appliance that is sold or offered for sale in California. Section 1605.3(n), Table N-1 sets a minimum performance standard that applies only to metal halide luminaires designed for installation in a vertical position. Section 1606, Table V, lists the required information for each type of appliance, but does not include “lamp position”. Additionally, the standard for metal halide ballasts is limited to those lamps rated at between 150 and 500 watts, but there is currently no reporting provision for lamp rating in Watts.

In order to determine compliance with the current Appliance Efficiency Regulations, staff proposes adding “[lamp position](#)”, with the possible responses “[vertical, horizontal, universal, other](#)” and add “[Lamp Rating \(Watts\)](#)” to Table V, Group N – “Metal Halide Luminaires”. The effective date of this change would be January 1, 2006.

7. Reporting Provisions for Mini-Tank Electric Water Heaters and Other Small Electric Water Heaters

Section 1606, Table V, Group F currently requires the reporting of “first hour rating” for “mini-tank electric water heaters” and for “other small electric water heaters.” Staff recommends replacing the parameter “first hour rating” with the term “[maximum gallons per minute](#)” which, because of the small volume of this category of water heater, is a more appropriate way of expressing hot water supply capacity than first-hour rating. The effective date of this change would be January 1, 2006.

8. Reporting Provisions for Under-Cabinet Fluorescent Fixtures

Section 1606, Table V, Group N currently indicates that there are no data reporting requirements for Under-Cabinet Fluorescent Fixtures. This needs to be amended to include the following data reporting items.

- a. [Manufacturer name, Brand name, Model number, and Regulatory Status](#)
- b. [Lamp length, inches](#)
- c. [Number of lamps for which fixture is designed](#)
- d. [Ballast efficacy factor.](#)

The effective date of this reporting provision would be January 1, 2007.

9. Clarification of Third-Party Reporting Requirements

Section 1606(e)(1), Filing by Third Parties, needs to be amended by adding the following language:

- (F) [In the case where a manufacturer has an agreement with another company to manufacture and market a product under the other company's name, such certification by the actual manufacturer may be made if:](#)
- I. [the manufacturer complies with all other third party requirements indicated herein;](#)
 - II. [both the actual manufacturer and the company listed on the product and the certification form as the manufacturer acknowledge to the Energy Commission that such an agreement between the companies exists, and specify how such an agreement impacts the Energy Commission's data collection program;](#)
 - III. [if new data is certified within 12 months from the submittal of this acknowledgement, reference to the dated acknowledgement will be provided to the Energy Commission as part of the certification package;](#)

- IV. [if new data is certified after 12 months from the submittal of this acknowledgement, a new acknowledgement statement is required; and](#)
- V. [if the second company is a subsidiary company \(rather than a completely separate entity\), both parties will specify this fact as part of their acknowledgement.](#)

10. Reporting Provisions for Whole House Fans and Residential Exhaust Fan

Section 1606, Table V, Group D, reporting requirements for Whole House Fans and Residential Exhaust Fans, because of a typographical error, the statement “Air Flow Efficiency ([Watts/CFM](#))” needs to be changed to “Air Flow Efficiency ([CFM/Watt](#)).” Also, in order to provide more useful information to the consumer, reporting provisions need to be added to include “[Residential exhaust fan type](#)” with the possible responses “[Inline single-port, Inline multi-port, Range hood, Bathroom and utility room](#)”. Also required is the additional reporting provision “[Whole-house fan type](#)” with the possible responses “[Belt-drive single-fan, Belt-drive dual-fan, Direct-drive single-fan, Direct-drive dual-fan](#)”.

11. Labeling Requirements for External Power Supplies

Section 1607(d)(9)(i)(a) needs to be amended to change the effective date for labeling requirements from “January 1, 2006” to “[July 1, 2006](#)” so that the effective date for labeling requirements matches the minimum efficiency standards’ effective date of July 1, 2006.

Section 1607(d)(9)(ii). Add the following Exception to the Color requirement, as indicated with underlined text:

“d. **Color.** Text to contrast with the nameplate background.

[EXCEPTION TO SECTION 1607\(d\)\(9\)\(ii\) d.:](#)

[If the marking required by these regulations is molded into the housing of the external power supply, the text need not contrast with the nameplate background.](#)

12. Standards for Power Supplies

Section 1605.3(u)(1), descriptive heading, needs to be amended as follows to clarify the testing parameters:

(1) **Power Supplies.** The efficiency in the active mode, [measured at both 115 volts at 60 Hz and at 230 volts and 50 Hz](#), of power supplies manufactured on or after the effective dates shall be not less than the applicable values shown (expressed as the decimal equivalent of a percentage); and the energy consumption in the no-load mode, [measured at both 115 volts at 60 Hz and at](#)

230 volts and 50 Hz, of power supplies manufactured on or after the effective dates shown shall be not greater than the applicable values shown in Table U-1 or Table U-2.

Section 1605.3(u)(1), Table U-1, needs to be amended to change the wattage ranges in the “Nameplate Output” column as follows:

- a. Change “< 1 Watt” to “0 to ≤ 1 Watt”
- b. Change “ ≥ 1 and ≤ 49 Watts” to “>1 to ≤ 49 Watts”

13. Documents Incorporated by Reference in Section 1605.1

Section 1605.1, under the heading “The following documents are incorporated by reference in Section 1605.1,” the publication “ASME/ANSI A112.8.1M-1996” is referenced. This document should actually be “ASME/ANSI A112.18.1M-1996.”

14. Standards for Refrigerators, Refrigerator-Freezers, and Freezers

Section 1605.3(a)(4)(ii)(I) states that “transparent reach-in doors shall be of triple-pane glass with either heat-reflective treated gas or gas fill”.

This should be changed to state “transparent reach-in doors shall be of triple-pane glass with either heat-reflective treated glass or gas fill”.

15. Portable Electric Spa Data Collection

Section 1606, Table V, Group G, data reporting requirements for Portable Electric Spas. In order to ensure compliance with Title 24 Building Standards, Section 114(a)4, and to provide useful information to the consumer, staff proposes to add the reporting of the “insulation R-value of the spa cover that is provided with the spa,” “Spa enclosure is fully insulated: Yes/no,” and “If spa is fully insulated, R-value of insulation.”

16. Residential Pool Pump Motor Speed Data Collection

Section 1606, Table V, Group G, in order to ensure compliance with the current Appliance Efficiency Regulations, staff proposes to add the data reporting item “Motor has capability of operating at two or more speeds with the low speed having a rotation rate that is no more than one-half of the motor’s maximum rotation rate” (T/F)

17. Paragraph Lettering in Section 1605.1

The current version of the adopted regulations contains an error in the lettering system designating the appliance types in Section 1605.1. The appliance type designator (j) is mistakenly used for both “Fluorescent Lamp Ballasts” and for the

“Lamps” category, when “Lamps” should be listed with the letter (k). As a result of this error, appliances with letter designations (k), (l), (m), and (n) are also incorrect and need to be revised to read (l), (m), (n), and (o).

18. Ceiling Fan Lighting

In order to use the same nomenclature and database look-up tables as used for lighting by other covered appliances, we need to change Section 1606, Table V, Group D, Ceiling Fans, Except Low-Profile Ceiling Fans, from “Lighting Type” to “Light Source Type.”

19. Residential Pool Pump Motor Type Data Collection

In order to use the same nomenclature and database look-up tables as used for other appliances with varying motor types, staff proposes to change Section 1606, Table V, Group G, Residential Pool Pumps, from the parameter that currently reads “Motor Speeds” to “Motor Design”, and from the parameter that currently reads “Motor Design” to “Motor Construction.”

Additionally, also for uniformity with other appliance types, staff recommends changing the responses for what is currently called “motor design” *from* the current choices of “PSC, Cap Start-Cap-Run, ECM, and Cap Start” *to* the choices of “PSC, Cap Start-Cap-Run, ECM, and Cap Start-[Induction Run](#)”

20. Filing by Manufacturers: Listing of Appliances in Database

Section 1606(a), Filing of Statements, contains a list of Exceptions for which the subsection is non-applicable. Because staff is now proposing to add reporting requirements for the following appliances, the list of Exceptions needs to be amended to remove the following appliance types from the list:

1. torchieres
2. consumer audio and video equipment
3. under-cabinet luminaires

21. Compliance, Enforcement, and General Administrative Matters

Section 1608(a), General Requirements for the Sale or Installation of All Appliances, contains a list of Exceptions for which the subsection is non-applicable. Because staff is now proposing to add reporting requirements for the following appliances, this list of Exceptions needs to be amended to remove the following appliance types from the list:

1. torchieres
2. consumer audio and video equipment
3. under-cabinet luminaires

22. Test Methods for Specific Appliances

Section 1604(h)(1), test method for commercial pre-rinse spray valves, needs to be amended with the following additional wording in order to ensure compliance with the efficiency standards:

The test method for commercial pre-rinse spray valves is ANSI/ASTM F2324-03, provided that adjustable flow-rate units shall be tested at their maximum possible flow rate.

23. Testing: All Appliances

Section 1603 should be amended to add the following new paragraph, in order to allow for federally-regulated appliance types for which there is a waiver from the normal test method:

(c) **Appliances for Which There Exists a Department of Energy Test Method Waiver.** Any federally-regulated appliance for which a waiver from the U.S. Department of Energy for exemption from federal testing requirements is received shall have its efficiency performance determined under California's Title 24, Part 6 (Building Energy Efficiency Standards). Section 10-109(b)4 of the Building Energy Efficiency Standards provides for the application of exceptional design for features that cannot be adequately modeled by other methods. Applications for exceptional design must use the reporting guidelines set forth in Section 10-110 of the Building Energy Efficiency Standards.

(1) The time limits, shown in Section 1606(b)(2)(a), for the Executive Director informing the manufacturer of the outcome of their data submittal, shall not apply to appliances where a Department of Energy waiver is in effect.

24. Filing by Manufacturers; Listing of Appliances in Database

Section 1606 mistakenly contains two paragraph letter "(c)" and as a result the paragraph lettering from the second paragraph letter "(c)" through "(e)" need to be re-lettered to correctly reflect the paragraph lettering sequence.

25. Declaration by Manufacturers

Section 1606(a) (4) contains instructions for a Declaration that must accompany each data submittal to the Energy Commission's Appliance Program. Staff is proposing to expand Section 1606(a) (4) to include appliance-specific statements that will be incorporated into each Declaration that must accompany each data submittal. The proposed changes to this section are as follows:

(4) Declaration.

- (A) Each statement shall include a declaration, executed under penalty of perjury of the laws of California, that:
- (4i) all the information provided in the statement is true, complete, accurate, and in compliance with all applicable provisions of this Article;
 - (2ii) if the statement is being filed electronically, that the requirements of Section 1606(g) have been and are being complied with; ~~and~~

(3iii) for appliances for which there is an energy efficiency, energy consumption, energy design, water efficiency, water consumption, or water design standard in Section 1605.1, 1605.2, or 1605.3, that the appliance complies with the applicable standards;

(iv) the appliance was tested under the applicable test method specified in Section 1604, and, for the following appliances, was tested as follows:

(I) for wine chillers that are consumer products, the appliance was tested to 10 CFR Section 430.23(a)(2005) with the modifications referenced in Table A-1;

(II) for automatic commercial ice-makers, the appliance was tested to ARI 810-2003, and the reported harvest rate is within 5% of the tested value;

(III) for multi-package refrigerated bottled or canned beverage vending machines, the volume was measured using ANSI/AHAM HRF1-1979;

(IV) for other self-contained commercial refrigerators, refrigerator-freezers, and freezers both with and without doors, the appliance's volume was measured using ANSI/AHAM HRF1-1979 and the controls of all appliances were adjusted to obtain the product temperatures referenced in Table A-2;

(V) for other self-contained commercial refrigerators, refrigerator-freezers, and freezers with doors that are pass-through and roll-through refrigerators and freezers, that the back (loading) doors remained closed throughout the test;

(VI) for all refrigerators, refrigerator-freezers, and freezers were tested using alternating current electricity only;

(VII) for all air-cooled central air conditioners with rated cooling capacity less than 65,000 Btu per hour and that were designed for use at either 230 volts or at another voltage, all appliances were tested at 230 volts and the results applied to other voltages;

(VIII) for all central air conditioners that were designed for use at either 208 volts or at another voltage, all appliances were tested at 208 volts and the results applied to other voltages;

(IX) for all split system central air conditioners and compressor-containing units, these models were tested with the non-compressor containing unit most likely to represent the highest national sales volume for the combined equipment;

(X) for all gas-fired air conditioners and gas-fired heat pumps, all appliances were tested to ANSI Z21.40.4-1996 as modified by CEC, Efficiency Calculation method for Gas-Fired Heat Pumps as a New Compliance Option (1996);

(XI) for evaporative coolers, all appliances were tested to the applicable test method referenced in Table D with the modifications appearing in Table D;

(XII) for whole house fans, all appliances were tested to HVI-916, and were tested with manufacturer-provided louvers in place; and

(XIII) for heat pump pool heaters, all appliances were tested using ANSI/ASHRAE 146-1998, as modified by the Addendum Test Procedure published by the Pool Heat Pump Manufacturers Association as referenced in Table G;

(v) all units of the appliance are marked as required by Section 1607, and, for the following appliances, are marked as follows:

(I) for all air conditioners, heat pumps, furnaces, boilers, and water heaters that are not subject to NAECA and that comply with the October 29, 2001 provisions in Tables 6.2.1 A through G of ASHRAE/IESNA Standard 90.1-1999, they are marked, permanently and legibly on an accessible and conspicuous place on the unit, with a statement that the equipment complies with the 2001 requirements of ASHRAE Standard 90.1;

(II) for all other air conditioners, heat pumps, furnaces, boilers, and water heaters that are not subject to NAECA and that comply with the October 29, 1999 provisions (but not with the October 29, 2001 provisions) in Tables 6.2.1 A through G shall be marked, permanently and legibly on an accessible and conspicuous place on the unit, with a statement that the equipment complies with the 1999 requirements of ASHRAE Standard 90.1;

(III) for all distribution transformers, each appliance complies with the labeling requirements of NEMA Standard TP3-2000;

(IV) for all illuminated exit signs meeting the criteria of Section 1605.3(I), each appliance is marked by the manufacturer with a block E inside a circle; the mark commonly referred to as "Circle E." The size of the mark shall be commensurate with other markings on the sign, but not smaller than 1/4";

(V) for all torchieres, each unit of torchieres and each package containing a torchiere is marked, permanently and legibly on an accessible and conspicuous place on the unit, in

characters no less than 1/8" on the inner surface of the reflector bowl of the torchiere, and 1/4" on the packaging, "LAMPS MUST TOTAL NO MORE THAN 190 WATTS-TORCHIERE IS NON-COMPLIANT IF IT IS ABLE TO DRAW MORE THAN 190 WATTS.";

(VI) for ceiling fans, each package containing a ceiling fan whose diameter exceeds 50 inches is marked, permanently and legibly on an accessible and conspicuous place on the unit's packaging, in characters no less than 1/4", the unit's airflow at high, medium, and low speed in CFM, and the unit's air flow efficiency in CFM/Watt at high, medium and low speed;

(VII) for commercial pre-rinse spray valves, each unit is marked, permanently and legibly on an accessible and conspicuous place on the unit, in characters no less than 1/8", the flow rate of the unit, in gallons-per minute (gpm) at 60 psi;

(VIII) for external power supplies, each power supply is marked on its nameplate with the appropriate numeral as referenced in Section 1607(d)(9), including compliance with mark format, font, size, color, and permanence referenced in Section 1607(d)(9)(ii);

(IX) for residential pool pumps, each pool pump is marked permanently and legibly on an accessible and conspicuous place on the unit, in characters no less than 1/4", with both the rated horsepower of the pump and the total horsepower of the motor.

26. Marking of Appliances

Section 1607(b) lists the requirements for the marking of basic data for all appliances, including the name, model number, and date of manufacture.

In order to clarify the marking requirements when multiple manufacturers and/or branders may be involved in a given appliance's manufacture, staff is proposing to add the following language to Section 1607(b)(1), which references other sections within the regulations which contain more detailed information on manufacturer/brander relationships :

- (1) manufacturer's name or brand name or trademark (which shall be the name, brand, or trademark of the manufacturer specified pursuant to Section 1606(a)(2)(A) and, if applicable, Section 1606(e)(1)(F));

UPDATE OF APPLIANCE EFFICIENCY REGULATIONS

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