



Analysis of Proposed Tier II and Tier III
General Service Incandescent Lamp Energy Savings



Prepared by: Peter Ostendorp, Chris Calwell (Ecos Consulting)

Prepared for: Gary Flamm (California Energy Commission)

December 6, 2005

Present Value of Savings for General Service Soft White and Frosted/Clear Incandescent Lamps

Proposed Standard	Design Life (years)	Annual Unit Energy Savings (kWh)	Annual Unit Energy Cost Savings (\$) @ \$.115/kWh	Annual Sales (million units)	First-Year Statewide Energy Savings (million kWh)	Incremental Cost of Improvement per Unit (\$)	Reduced Cost Over the Design Life of the Appliance (\$)
Tier 1	1.1	1.07	\$0.12	74	79	\$0.06	\$0.08
Tier 2	1.1	4.2	\$0.48	68	284	\$0.16	\$0.37
Tier 3	1.1	4.3	\$0.49	74	315	\$0.16	\$0.38

Simple Payback for General Service Soft White and Frosted/Clear Incandescent Lamps

Proposed Standard	Added First Cost per Unit	Annual Unit Energy Savings (kWh)	Annual Unit Energy Cost Savings (\$) @ \$.115/kWh	Design Life (years)	Simple Payback Period (years)
Tier 1	\$0.06	1.1	\$0.12	1.1	0.5
Tier 2	\$0.16	4.2	\$0.48	1.1	0.3
Tier 3	\$0.16	4.3	\$0.49	1.1	0.3

Memorandum

To: Interested Parties

Date: January 13, 2006

Telephone: (916) 654-4039

From: **California Energy Commission** - R. Michael Martin
 1516 Ninth Street
 Sacramento CA 95814-5512
 Buildings and Appliances Office

Subject: **STAFF NOTES TO SIX REQUESTS FOR MODIFICATION OF APPLIANCE EFFICIENCY REGULATIONS**

Background

The Commission has received six letters, addressed to various individuals but all requesting modification of existing Appliance Efficiency Regulations.

The Commission, on December 15, 2004, adopted new provisions for over twenty appliance types. Many of these provisions include standards that take effect on January 1, 2006. As we drew nearer to the effective date, several manufacturers, none of whom had accepted our invitation to take part in developing the standards, expressed concern over some of these new provisions.

The Efficiency Committee has two alternatives: The first is to require these requests to be submitted to the Commission as formal petitions for rulemaking. The second is for the Efficiency Committee to add these items to the scope of the current rulemaking on its own initiative.

The Efficiency Committee chose the second alternative.

Subject of Requests

The following letters will be considered in the rulemaking:

Subject	Author of Letter	Date	Staff Recommendation
Walk-In Refrigerators and Freezers	Kysor Panel Systems National Cooler Glen Anthony	Oct. 17, 2005 Nov. 14, 2005 Oct. 22, 2005	1. Define "envelope." 2. No further changes to regulations.
Pools and Spas	SPEC	Oct. 26, 2005	No changes to regulations.
	International Aquatic Foundation	Jan. 6, 2006	Under consideration by technical staff
Power Supply Accessories	Staff Recommendation		1. Change "accessories, service parts, or spare parts" to "service parts, or spare parts." 2. No further changes to regulations.
Hot Food Holding Cabinets	NAFEM	Dec. 15, 2005	Modify definition of "hot food holding cabinet."

Walk-In Refrigerators and Freezers

Three letters have been received related to the provisions adopted on December 15, 2004 related to walk-in refrigerators and freezers. They make the same basic claims:

- wall and ceiling insulation standards are too restrictive,
- it is unclear whether the R-value provisions for envelopes apply to doors,
- it is unclear whether the R-value provisions for envelopes apply to floors,
- the door sizes to which the automatic door closer provisions apply should be modified to exclude from the regulation those doors that are exactly 4 foot wide by 7 foot high.

Staff recognizes that the term "envelope" needs to be defined and recommends adding the following definition to Section 1602(r).

"Envelope of a walk-in refrigerator or walk-in freezer means the walls and ceiling of the walk-in refrigerator or walk-in freezer, but not the door not floor."

Staff notes that the other provisions were documented in a previous rulemaking (with no public opposition) as meeting the following legislative criteria:

- Walk-in refrigerators and freezers are appliances whose use requires a significant amount of energy on a statewide basis.
- The adopted provisions are feasible and attainable.
- The adopted provisions will not result in added total costs to the consumer over the designed life of the appliances.

None of the petitioners have produced data that refutes these findings.

Furthermore, changing any standard at this late date would be a burden to those manufacturers that have in good faith prepared to meet the new standards.

Pools and Spas

The letter from the California Spa and Pool Industry Education Council (SPEC) outlines several concerns. This letter was responded to by PG&E's technical consultant. Staff agrees with the technical consultant's position and recommends to the Commission that no change be made at this time to the regulations for pools and spas.

A letter dated January 6, 2006 from the International Aquatic Foundation was delivered to the Commission staff on January 9, 2006. Staff has requested from its technical consultants a review and recommendation.

Power Supply Accessories

The adopted regulations, in Section 1605.3(u)(1) include an exception for “accessories, service parts, and spare parts.” In response to a request for clarification, staff recognizes that what was intended was “service parts and spare parts”, and recommends to the Commission that the term “accessories” be deleted.

Hot Food Holding Cabinets

Some manufacturers of food service equipment claim that the scope of the heat loss provisions for hot food holding cabinets is too broad and needs to be narrowed. The North American Food Equipment Manufacturers (NAFEM) has recommended wording for a revised definition of “hot food holding cabinet.” Staff supports the NAFEM proposal.

CALIFORNIA ENERGY COMMISSION

1516 Ninth Street
Sacramento, California 95814

Main website: www.energy.ca.gov



In the matter of,)	Docket No. 05-AAER-2
California Code of Regulations,)	
Title 20, Sections 1606–1608)	NOTICE OF PUBLIC HEARING
)	
)	RE: PROPOSED AMENDMENTS TO THE
)	APPLIANCE EFFICIENCY REGULATIONS

Notice of a Commission Adoption Hearing Availability of 15-Day Language, Additional Reports Relied Upon, and Opportunity for Comment

The California Energy Commission will conduct a public hearing to adopt proposed amendments to the appliance efficiency regulations for general service and reflector incandescent lamps, metal halide luminaires, hot food holding cabinets, power supply accessories, walk-in refrigerators and freezers, pools and spas. The hearing will take place at the following time and place:

WEDNESDAY, APRIL 26, 2006
10 a.m.
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
First Floor, Hearing Room A
Sacramento, California
(Wheelchair Accessible)

Audio from this meeting will be broadcast over the Internet.

For details, please go to:

www.energy.ca.gov/webcast/

At the hearing any person may present written or oral comments on the proposed amendments and additional documents relied upon.

Purpose

On December 15, 2004, the Energy Commission adopted amendments to the Energy Commission's Appliance Efficiency Regulations (California Code of Regulations, Title 20, Sections 1601-1608). The proposed amendments, known as 15-day language, were published on November 30, 2004, containing two proposals (Alternative 1 and Alternative 2) for provisions in 1605.3(k)(2), Table K-3 (Energy Efficiency Standards for State-Regulated General Service Incandescent Lamps), 1605(k)(3), Table K-4 (Energy Efficiency Standards for State-Regulated Incandescent Reflector Lamps), and 1605.3(n)(3), Table N-1 (Energy Efficiency Standards for Metal Halide Luminaires).

The Energy Commission decided to adopt Alternative 2. The adoption of Alternative 2 had broad support from affected stakeholders (they were less stringent than Alternative 1), and the Energy Commission wanted staff to continue working on concerns related to Alternative 1.

The 15-day language, containing both Alternative 1 and Alternative 2, dated November 30, 2004 is available on the Energy Commission website at:

http://www.energy.ca.gov/appliances/2004rulemaking/documents/2004-11-30_EXPRESS_TERMS.PDF

The Energy Commission directed the Efficiency Committee (Committee) to continue this rulemaking to consider possible efficiency standards for full-spectrum or enhanced spectrum general service incandescent lamps. The order also directed the Committee to explore the possibility of making efficiency standards for general service incandescent lamps, incandescent reflector lamps, and non-vertical metal halide luminaires more stringent than those adopted in Alternative 2, and ordered appropriate action to be taken as soon as possible.

The Order Adopting Regulations and Directing Additional Rulemaking Activities are available on the Energy Commission website at:

http://www.energy.ca.gov/appliances/2004rulemaking/notices/2004-12-22_ORDER_ADOPT.PDF

Committee Workshops were held on July 18, 2005, and October 26, 2005. Information about these workshops is available on the Energy Commission website at:

<http://www.energy.ca.gov/appliances/lamps/documents/index.html>

A Notice of Proposed Action (NOPA) and the proposed amendments to the Express Terms (45-Day Language) were posted on the Energy Commission website on January 5, 2006. The first public hearing listed on the NOPA, with the Energy Commission's Efficiency Committee (Vice Chair Jackalyne Pfannenstiel, Presiding Member) was held on February 14, 2006.

At the second public hearing listed on the NOPA, with the full Energy Commission on March 1, 2006, the Efficiency Committee recommended, and the Energy Commission agreed to not adopt the proposed amendments to the Express Terms (45-Day Language), but to come back to the Energy Commission at a future date with a proposal to adopt 15-Day Language. This is the notice to announce the availability of the 15-Day Language, additional technical documents relied upon, the start date and end date of the comment period, and the adoption date for the proposed amendments.