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COMMENTS OF THE CONSUMER ELECTRONICS ASSOCIATION ON PROPOSED AMENDMENTS TO APPLIANCE EFFICIENCY REGULATIONS

Rulemaking on Appliance Efficiency Regulations
DOCKET NO. 06-AAER-1

Introduction

The Consumer Electronics Association (CEA) would like to thank the California Energy Commission and its Efficiency Committee for proposing to amend California's Appliance Efficiency Regulations for consumer audio and video products and external power supplies. CEA appreciates the Energy Commission's recognition of the consumer electronics industry's concerns associated with the new regulations, including the impact of these regulations on safety and consumers, the digital television transition, the federal Energy Star program, product development cycles, and technological innovation.

The Energy Commission's proposed amendments include delaying the effective dates for the minimum efficiency standards of single voltage external power supplies, which we welcome. In these comments, CEA addresses the Commission's current proposals to regarding external power supplies and digital television adapters. We appreciate our common views on removing the requirement for single voltage external power supplies to meet the minimum efficiency requirements at 230 volts at 50 hertz.

CEA represents more than 2,000 companies involved in the design, development, manufacturing, distribution and integration of audio, video, in-vehicle electronics, wireless and landline communications, information technology, home networking, multimedia and accessory products, as well as related services that are sold through consumer channels. CEA also produces the nation's largest annual trade event, the International Consumer Electronics Show.

These comments on the Energy Commission's proposed amendments follow comments and presentations submitted by CEA to the Commission during the past several months and expand upon the electronics industry's prior input to the Commission, including comments submitted in 2003 and 2004.

External power supplies

A 12-month, not a six-month, delay is needed.

The Commission has proposed a six-month delay of the effective dates for the minimum efficiency standards of single voltage external power supplies. For several important reasons which follow, we maintain that the effective date of the first-tier standards for external power supplies, as indicated in Table U-1 of the regulations, should be delayed a full 12 months from July 1, 2006 to July 1, 2007, except for telephony products. Similarly, the effective date for the second-tier standards, as indicated in Table U-2, should be delayed in concert with the first-tier standards. For the second-tier standards, the January 1, 2008 effective date should be changed to January 1, 2009.

Supply and cost issues

The Commission's mandatory regulations for external power supplies have been imposed on a marketplace that simply is not prepared in terms of adequate supply, reasonable cost and technically feasible solutions. This scenario is understandable given the origin of the Commission's regulations for external power supplies.

VOLUNTARY CRITERIA MADE MANDATORY. The CEC created new and *mandatory* regulations for external power supplies that are based exactly on the *voluntary* thresholds established within the Energy Star program, as indicated in the table below. These Energy Star program specifications were never intended as nor negotiated to be mandatory limits after any set period of time. In fact, the Energy Star program criteria are designed to focus on the top 25% of the market in terms of energy efficiency. In theory, if the Energy Star program is meeting its stated goal for a given product category, making such program criteria mandatory would remove 75% of product models from the market. As with the criteria established for the Energy Star programs covering audio and video products, the external power adapter program criteria for Energy Star were developed to be a voluntary initiative and reasonable incentive for manufacturers and their suppliers. The good faith negotiations that led to the Energy Star criteria and related effective dates took into account time and cost considerations related to product design, marketing and certification. In addition to making the Energy Star Tier 1 program criteria mandatory in California, the CEC also mandated compliance with Energy Star Tier 2 criteria, which are clearly only tentative proposals within the Energy Star program for external power supplies.

INADEQUATE SUPPLY, HIGH COSTS. CEA has examined the current marketplace for external power supplies with a particular focus on external power supplies related to the wide range of consumer electronics products which use them. Based on feedback from consumer electronics manufacturers and their suppliers, we conclude:

- There are unique needs across various categories and models of consumer electronics that require custom specifications for external power supplies sourced from suppliers. In the current marketplace for external power supplies, this

results in asymmetric pricing and higher costs which are passed through the supply chain to the consumer, resulting in price increases of *$3 to $26 at retail.*

- In addition to asymmetric pricing, there also is asymmetric supply in the current marketplace for external power supplies across various categories and models of consumer electronics. Consumer electronics manufacturers requiring large quantities of external power supplies, especially in low-voltage ranges, are having difficulty finding sufficient CEC-compliant product.

Technical issues

The Commission's regulation for external power supplies does not take into account product redesign issues necessitated by a mandated change to power supplies that meet the CEC's regulatory specifications. In many cases, there is an absence of technically feasible solutions or a need to undertake major product redesign. A fundamental point is that in many cases, there simply is no "drop-in" replacement. In other words, compliance with the CEC's external power supply regulation is not as simple as substituting a compliant switch-mode power supply for a non-compliant linear power supply. External power supplies are part of a product system that must be considered, evaluated and tested as a system.

In addition, linear external power supplies are typically used in low-cost products to minimize electromagnetic interference (EMI) and audio noise. Replacement switching type supplies must be tested and selected carefully to avoid introducing audible noise and interference to many audio-based products that are sensitive to conducted noise. In addition, for low-cost consumer products, linear suppliers are more cost-effective solutions. Forcing a near-term mandatory changeover to a power supply that meets the CEC's regulation could raise the product's retail price to a point at which the product is no longer attractive to consumers. Finally, mandating change to compliant switch-mode power supplies is a problem for many manufacturers which have voluntarily adopted higher dielectric requirements to improve surge immunity to reduce claims, field failures, and improve customer satisfaction for their products.

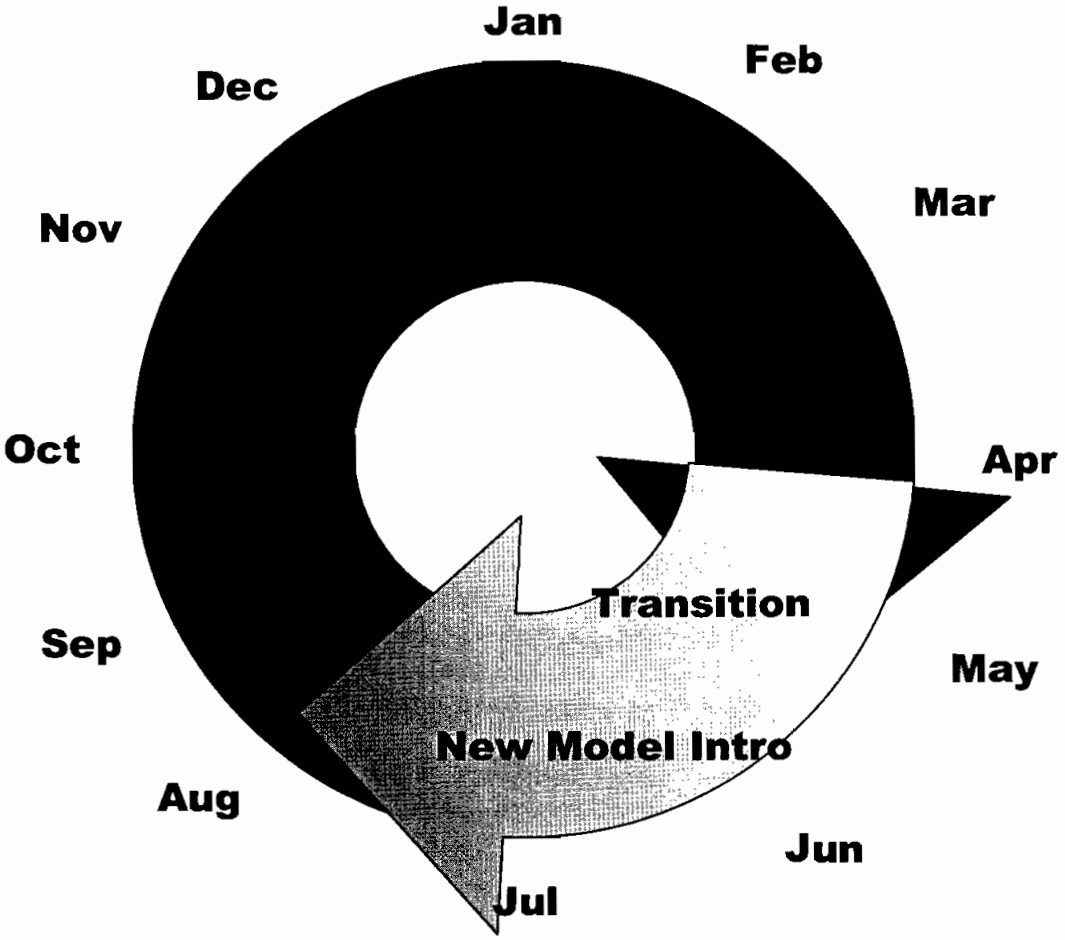
Safety certification and compliance issues

Consumer electronics manufacturers must certify their products to national and international standards related to product safety and EMI. As noted above, compliance with the Commission's regulation for external power supplies requires in many cases the redesign of the host product. This redesign necessitates recertification to appropriate product safety and EMI standards and regulations, which is a process involving additional time and cost –often tens of thousands of dollars per product model. Such compliance costs have a particularly acute impact on small manufacturers.

Industry product development cycles

As a general rule, the product development cycle in the consumer electronics industry can require lead times from 18 to 24 months for significant engineering design changes. The typical development cycle includes numerous steps beginning with the development of a marketing plan and culminating in mass production. This design cycle cannot be appreciably shortened nor can it be circumvented. Neither the analysis supporting the Commission's regulations nor the regulations themselves account for time-to-market issues particular to the high tech industry.

A July 1, 2007 effective date for the initial standards for external power supplies, as opposed to January 1, 2007, is also important given the product development and retail cycles which drive the consumer electronics industry. As illustrated below, the effective date of July 1, 2007 fits well with these cycles.



We also note that those states with mandatory regulations for external power supplies either have or are expected to have a January 1, 2008 regulatory effective date, as

indicated in the table below. A 12-month delay to July 1, 2007 brings California closer to the majority of states with January 1, 2008 effective dates.

State	Effective Date
Arizona	1/1/08
Massachusetts	1/1/08
Oregon	1/1/07*
Rhode Island	1/1/07*
Washington	1/1/08

** We expect Rhode Island will harmonize with Massachusetts, and Oregon will harmonize with either Washington or California.*

In summary, the marketplace simply is not prepared to meet the current July 1, 2006 effective date for the Commission's regulation for external power supplies. CEA appreciates the Commission's proposal of a six-month delay; however, in light of the current marketplace conditions regarding supply, cost and technically feasible solutions, we find, based on input from a wide range of manufacturers, that a delay of only six months is insufficient. We urge the Commission to grant a full 12-month delay and establish an effective date of July 1, 2007 (except for telephony products). With an additional six months' delay beyond the six proposed by the CEC, we believe that marketplace supply conditions described above will improve significantly. Without such a delay in place, we remain extremely concerned about product availability and cost impacts to consumers as well as manufacturers.

An effective date of July 1, 2008 should be established for wireline telephones.

CEA is also concerned about the lack of supply for external power supplies meeting the requirements of wireline telephones, particularly cordless telephones. Thus, we request a delay until July 1, 2008 for a target implementation date for this category of devices. Although there has been a joint effort by both cordless telephone manufacturers and external power supply manufacturers to design and test a suitable power supply that meets the requirements of cordless telephones, at this moment it still does not exist. Therefore, without time to complete an acceptable design, perform the required testing for both product safety and radio frequency interference, and evaluate the finished external power supply product for durability and performance, it is not reasonable for manufactures of cordless telephones to meet an effective date before July 1, 2008.

The TIAX report presented and submitted for the record at the January 30, 2006 workshop noted that 4.4 million external power supplies are needed annually for California. When additional wireline telephone products such as answering systems and higher-feature corded telephones that use AC power are added, the total becomes approximately 6.7 million power adapters for California. However, telephone manufacturers do not have a way of segregating products that are sold in California and providing unique power adapters for them. Manufacturers ship products to retailers'

distribution centers, from which the retailers may ship products to several states or even nationally. Thus, all telephone products will have to be equipped with external power adapters that comply with the Commission's regulations. This means that approximately 57 million power adapters are needed to fill the supply pipeline in order to ensure the 6.7 million sold in California comply with the CEC's regulations.

A spare parts exemption of 7 years is necessary to comply with California law.

The Commission has recognized the importance a manufacturer's legal and customer service obligations to stock and supply spare parts for sale, product servicing and warranty claims for existing products using external power supplies. In an earlier rulemaking, the Commission amended its regulations to allow a three-year period beyond the effective dates for the external power supply standards during which a manufacturer could continue to make such parts available. However, this three-year extension is insufficient to meet California's own regulatory requirement that manufacturers provide spare parts for up to seven years[1]:

> *1793.03. (a) Every manufacturer making an express warranty with respect to an electronic or appliance product described in subdivision (h), (i), (j), or (k) of Section 9801 of the Business and Professions Code, with a wholesale price to the retailer of not less than fifty dollars ($50) and not more than ninety-nine dollars and ninety-nine cents ($99.99), shall make available to service and repair facilities sufficient service literature and functional parts to effect the repair of a product for at least three years after the date a product model or type was manufactured, regardless of whether the three-year period exceeds the warranty period for the product.*
>
> *(b) Every manufacturer making an express warranty with respect to an electronic or appliance product described in subdivision (h), (i), (j), or (k) of Section 9801 of the Business and Professions Code, with a wholesale price to the retailer of one hundred dollars ($100) or more, shall make available to service and repair facilities sufficient service literature and functional parts to effect the repair of a product for at least seven years after the date a product model or type was manufactured, regardless of whether the seven-year period exceeds the warranty period for the product.*

Therefore, CEA urges the Commission to amend its regulations related to external power supplies to provide a full seven-year parts exemption which will allow manufacturers to meet their legal obligations under California law.

In addition, since the volume of requests for spare parts for electronics drops significantly over time, to mandate a switch to compliant power supplies for products that are between four and seven years old (in cases where simple substitutions are feasible) would be extremely costly to manufacturers. In the absence of an exemption for such spare parts, manufacturers would be obligated to undertake a complete power supply redesign for a very limited number of external power supplies that would be requested by consumers.

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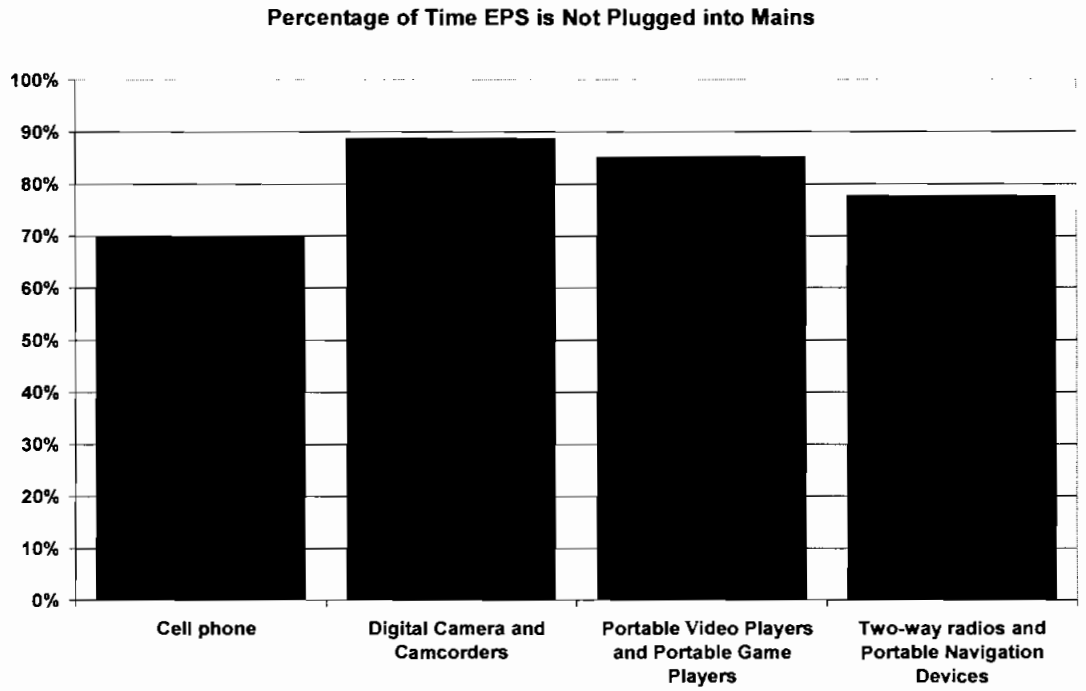
[1] California Civil Code, Section 1793.03.

Finally, it is important to note that most public safety communications products have a very long life for which compatible replacement parts need to continue to be supported. Otherwise these products could not continue to be used, which then would lead to greater costs for the public safety community.

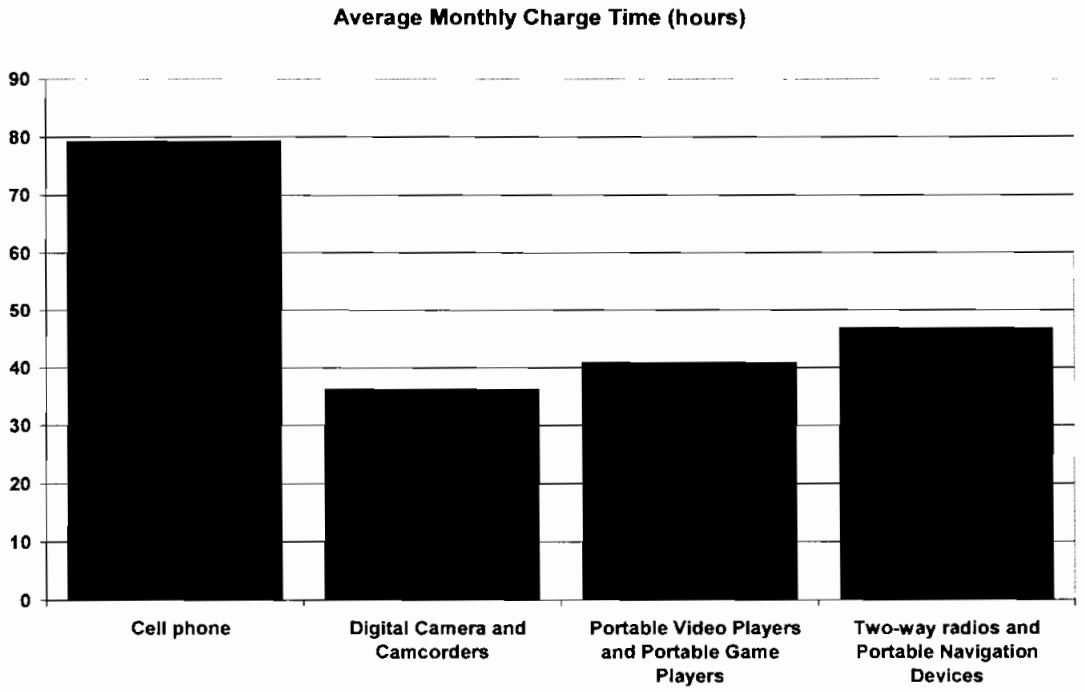
Limited use products should be exempted.

CEA urges the Commission to consider a regulatory exemption for limited use consumer electronic devices with batteries, and others without batteries, that exhibit extremely low use. Consumers rely on such external power supplies to a much less degree than they use other external power supplies; they often use them in mobile situations with no connection to the mains. Based on feedback from manufacturers and recent CEA research, mandating compliance with the CEC's regulation for such products does not provide the California consumer with the perceived benefits of the regulation. CEA's research shows external power supplies plugged into the mains average less than six hours per month for digital cameras and camcorders. As the chart below highlights, external power supplies for digital cameras, camcorders, portable video devices, portable game players, two-way radios, and portable navigation devices spend a very low amount of time plugged into the mains.



Furthermore, when these mobile products are charged, they are charged for a very short period of time as the chart below illustrates – suggesting the consumer is simply powering up the device to again take on the go. Given these product and energy use patterns, compliance with the Commission's regulation for external power supplies

proves onerous and costly without a resulting benefit to the consumer. As CEA's research also discovers, it is not unreasonable that such regulation could apply to external power supplies with more frequent use, such as mobile (cellular) phones. However, while these products are used in a mobile environment, CEA's research suggests that the daily use of mobile phones alters the consumer's behavior as it relates to external power supply use.



Digital television adapters

The regulation for digital television adapters needs to be withdrawn.

The Commission has proposed delaying its regulation for digital television adapters by one year. However, a complete withdrawal of the regulation is the only justifiable and appropriate course of action by the Commission given the premature nature of the regulation and potential detriment to the nationwide DTV transition.

The federal law signed last month by President Bush sets February 17, 2009 as the date when television broadcasters will cease "analog" transmissions and deliver only "digital" TV signals. That means millions of analog TVs nationwide that depend solely on over-the-air broadcast signals will need a DTA to continue to receive free broadcast TV. The new law also provides for up to $1 billion federal subsidy program to help consumers offset the cost of a DTA ($40 each, for up to two units per household).

The National Telecommunications and Information Administration (NTIA) within the U.S. Department of Commerce is charged with administering this program. The DTAs are a crucial component of the final digital television transition, which in itself will save many millions of dollars of energy usage as TV stations cease their high-power analog broadcasts. The CEC has effectively banned sole function DTAs, yet sole function DTAs are the only DTAs eligible for subsidy under federal law. Sole function DTAs are a necessity to ensure television reception for the millions of Californians who rely on over-the-air TV and who will rely on the federal subsidy for DTA purchases. The inability of millions of consumers in California to participate in the federal DTA subsidy that is now being defined by the NTIA is a threat to the success of the transition to digital broadcasting mandated by federal law. Further, the CEC's analysis of the economic impact of its regulations on consumers in California does not factor in the loss of the $80 federal subsidy to millions of consumers in California and thus provides a totally inadequate and inaccurate assessment of the economic effects of this regulation on Californians. The delay to January 1, 2008 only complicates matters since it corresponds to the implementation date of the federal subsidy program. This compelling public interest and the obvious conflict with federal law outweigh all arguments in favor of this regulation.

Further, it is clear now that the Energy Commission did not meet its statutory obligation to rely on an existing baseline for determining cost effectiveness and feasibility. This is due in part to the complexity of the DTV marketplace and overzealous assertions of a few energy advocates that have since been tempered by better information exchange. For example, the obviously flawed claim of the existence of 46,000 DTAs in California would certainly not be made now. We are extremely concerned that having skipped its obligation to show cost effectiveness, the CEC is now determined to show feasibility by hiring a consultant to build a prototype. If the emphasis is entirely on energy efficiency, such a prototype can almost certainly be built. However, that prototype is not likely to consider the issues that real products must face, including: federal obligations to support closed captioning and v-chip (program blocking); marketplace requirements to process system information (PSIP); provision for a usable on-screen display; power up to the last channel viewed, and rejection of multi-path interference.

Since the January 30, 2006 workshop, CEA has completed work on CEA-2013, a standard for standby energy consumption in set top boxes. We are immediately resuming work to investigate the proper standby power numbers for DTAs for inclusion in the standard. We are hard-pressed to understand how CEC can already have the answer to a question that the experts feel like they just now are able to address. We also note that energy conservation advocates are part of this standard setting process and have contributed greatly to the first version of the standard.

We respectfully request that the Energy Commission remove the regulation on DTAs. This is a critical time in the DTV transition. Companies are aware of the need to have efficient DTAs on the market, and CEA is already working on standards to facilitate the process.

Conclusion

As noted in earlier written comments and presentations at the January 30th workshop, CEA welcomes the opportunity to work with the Commission to the extent that it addresses the problems with crucial assumptions identified in the original analyses that need to be assessed to determine if the standards for consumer audio and video products and external power supplies are cost-effective or not cost-effective. Most of the Commission's original analyses supporting the Appliance Efficiency Regulations for consumer electronics use outdated power draw values to develop an energy consumption baseline that, in many cases, does not appear to reflect the performance of typical new devices. The Commission's analysis of 2003 relied on data from 1999. Furthermore, the validity of the incremental cost estimates for noncompliant televisions, DVD players and recorders, compact audio products cannot be assessed because the CEC's original analyses do not provide citations for the source of the estimates, nor do they lay out the design changes or design path applied to meet the regulation. This basic flaw precludes meaningful cost-effectiveness assessments for these consumer electronics products.

We recognize the Commission's efforts to address energy concerns. However, based on feedback from our members and the industry, we believe that the Commission's use of mandatory government regulations as an attempt to address energy efficiency in the consumer technology sector will harm product innovation and design. A government regulation that limits how much energy a given product may use in standby or active mode will necessarily limit the energy-consuming features that can be integrated into that product, whether a TV or other device. Safety-oriented features such as Public Alert are also at risk as a result of such limits. Going forward, the CEC's mandatory limits on energy use could drive popular features and future innovations into separate devices, such as set top boxes or accessories, resulting in a less efficient overall system with a net increase in energy use.

We look forward to working with the Commission in pursuit of alternative approaches, including industry standards and voluntary programs. We encourage the CEC to participate in voluntary standards development organizations (SDOs), including CEA, a standards setting organization whose procedures are accredited by the American National Standards Institute (ANSI). In mid-2004, CEA launched a set-top box energy efficiency standards development project. By specifying typical power use for set-top boxes and making allowances for the integration of multiple secondary functions into these devices, the new standard "CEA-2013" facilitates innovation for energy efficient, advanced, multi-function set-tops boxes. In early 2005, CEA, as the U.S. Technical Advisory Group (TAG) administrator, helped launch a new project for consideration in the International Electrotechnical Commission (IEC) Technical Committee 100. The project, entitled "The Measurement of TV Average Power Consumption," should culminate in a Joint Project Team with the IEC TC110 (displays) this spring. The related proposal specifies a standard method of measurement of the average power consumed by a television in the active mode, and if the stakeholders agree, in standby as well. The standard intends to describe the test environment, measurement input, and power

consumption metrology useful for comparative purposes. Participation in these projects is open to all interested parties.

Going forward, CEA would like to propose that a technical joint ad hoc group be formed, under the auspices of CEA, by CEA members and members of the CEC staff, to exchange technical information about the Title 20 Appliance Efficiency Regulations. We propose that the ad hoc group be an information conduit about the regulation's technical interpretation and implementation. This ad hoc would fill a practical need for ongoing communication with the industry when manufacturers want to carry on a technical dialogue with the Commission.

Respectfully submitted,

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