

**INITIAL STATEMENT OF REASONS**  
**PROPOSED AMENDMENTS**  
**TO APPLIANCE EFFICIENCY REGULATIONS**  
**CALIFORNIA CODE OF REGULATIONS,**  
**TITLE 20, SECTIONS 1601, 1602, 1605.3, and 1606**

**CALIFORNIA ENERGY COMMISSION**  
**Docket Number 07-AAER-2**  
**August 14, 2007**

<b>DOCKET</b> <b>07-AAER-2</b>	
<b>DATE</b>	AUG 14 2007
<b>RECD.</b>	AUG 22 2007

**INTRODUCTION**

Existing law [Public Resources Code § 25402(c)] requires the California Energy Commission ("Energy Commission") to adopt regulations that prescribe minimum efficiency levels for appliances. The Energy Commission first adopted appliance efficiency regulations in 1976 and has periodically revised them since then. The current regulations include provisions on testing of appliances to determine their efficiency, reporting of data by manufacturers to the Energy Commission, standards establishing mandatory efficiency levels, and compliance and enforcement procedures, as well as general provisions on the scope of the regulations and definitions.

The existing appliance efficiency regulations include efficiency standards for digital television adapters or DTAs, which are commercially-available electronic products for the sole purpose of converting digital video terrestrial broadcast signals to analog (NTSC) (standard adopted by the National Television System Committee of the Federal Communications Commission) video signals for use by a TV or VCR. The efficiency regulations for DTAs, which were adopted on December 15, 2004 (less than five years ago), are scheduled to take affect on January 1, 2008.

In the rulemaking proceeding that is the subject of this Notice of Proposed Action ("NOPA"), the Energy Commission is proposing to repeal the energy efficiency standards for DTAs.

Pursuant to Public Resources Code section 25402 (c)(3), during the period of five years after the Energy Commission has adopted an appliance efficiency standard for a particular appliance, **no increase or decrease in the minimum level of operating efficiency required by the specific appliance efficiency standard can become effective, unless the Energy Commission adopts other cost-effective measures for that appliance.** Because the appliance efficiency standards for DTAs were adopted within the five year period prescribed by section 25402(c)(3), the Energy Commission must comply with this section to repeal the DTA standards.



## **ENERGY COMMISSION'S DETERMINATIONS UNDER PUBLIC RESOURCES CODE SECTION 25402(C)(3)**

Pursuant to Public Resources Code section 25402 (c)(3), the Energy Commission has determined that the proposed repeal of the appliance energy efficiency regulations for DTAs will not result in a decrease in the minimal level of operating efficiency required by the existing DTA standards. Furthermore, the Energy Commission has determined that the repeal of the DTA standards may actually result in a small increase in operating efficiency and in potential cost savings to the consumer, thus, no other cost-effective measures for DTAs will be required.

The basis for this determination is supported by an Energy Commission prepared document titled "Comparison of Savings from the CEC and NTIA DTA Standards" which is listed below as a document relied upon. In summary, subsequent to the adoption of the energy efficiency regulations by the Energy Commission for DTAs, Congress enacted legislation relating to DTAs which resulted in the adoption of federal standards by the National Telecommunications Infrastructure Administration (NTIA) for DTAs being sold in the United States. The NTIA standards, while allowing greater power use in both active and standby modes, will result in slightly more energy savings than the Energy Commission's DTA standards because the NTIA standard requires an automatic power-down feature which will increase the hours of operation in the lower power standby mode resulting in a potential 5 kWh/year lower energy use and energy cost for the consumer.

### **SPECIFIC PURPOSE, RATIONALE, AND NECESSITY OF EACH PROPOSED ADOPTION, AMENDMENT, AND REPEAL**

The California economy, and the well-being of all of California's citizens, depends on an adequate, reasonably-priced, and environmentally-sound supply of energy. Recent growth in electricity demand has strained the reliability of California's electricity system and has in some circumstances contributed to a substantial rise in electricity prices. Similarly, natural gas supplies are becoming tighter, and natural gas prices are increasing.

Improvements in energy efficiency are the cheapest and most environmentally-friendly methods to help bring demand and supply into balance. Thus existing law (Public Resources Code section 25402(c)) requires the Energy Commission to adopt standards that prescribe minimum efficiency levels for appliances.

The following sections are directly affected by the repeal of the DTA energy efficiency standard:

#### **Section 1601. Scope.**

Section 1601(u) Power supplies and consumer audio and video products: delete "digital



television adapters" from the scope. The specific purpose and rationale of this amendment is to delete reference to DTAs in the scope section which is necessary to repeal the appliance efficiency regulations for DTAs.

#### Section 1602. Definitions.

Section 1602(u) Power Supplies and Consumer Audio and Video Equipment: delete the definitions for "Digital television adapter", "STB on Mode," and "STB standby-passive Mode." The specific purpose and rationale of these amendments is to delete references to DTAs in the definition section which is necessary to repeal the appliance efficiency regulations for DTAs.

#### Section 1605.3. California Standards for Non-Federally-Regulated Appliances

Section 1605.3(u)(2), Table U-3, Standards for Consumer Audio and Video Equipment: delete the reference to DTAs and the effective date of "January 1, 2008." The specific purpose and rationale of this amendment is to delete the efficiency standard for DTAs which is necessary to repeal the appliance efficiency regulations for DTAs.

#### Section 1606: Filing by Manufacturers; Listing of Appliances in Database.

Table V, Data Submittal Requirements, U, Consumer Audio and Video Equipment Products: delete the "Appliance" for DTAs and the "Required Information" for DTAs. The specific purpose and rationale for this amendment is to delete reference to DTAs and the required data submittal in Table V which is necessary to repeal the appliance efficiency regulation for DTAs.

#### **REASONS FOR MANDATING SPECIFIC ACTIONS, PROCEDURES, TECHNOLOGIES, OR EQUIPMENT; CONSIDERATION OF PERFORMANCE STANDARDS**

No specific action, procedures, technologies or equipment is being mandated. No prescriptive standards are being considered.

#### **STUDIES, REPORTS, AND DOCUMENTS RELIED UPON**

"Comparison of Savings from the CEC and NTIA DTA Standards"



**REASONABLE ALTERNATIVES, IF ANY, TO THE PROPOSED AMENDMENTS THAT WERE CONSIDERED, INCLUDING ALTERNATIVES TO LESSEN IMPACTS ON SMALL BUSINESS, AND REASONS FOR REJECTING THEM**

Since the Energy Commission is not proposing any new minimum efficiency standards in the currently proposed amendments, no alternative has been considered or deemed necessary to lessen impacts on small businesses. The basis for this determination (i.e., there will no increase in the purchase price of DTAs that will affect small businesses) is supported by the findings in the document titled "Comparison of Savings from the CEC and NTIA DTA Standards."

**FACTS, EVIDENCE, DOCUMENTS, TESTIMONY, OR OTHER EVIDENCE RELIED UPON TO SUPPORT THE INITIAL DETERMINATION, IN THE NOTICE OF PROPOSED ACTION THAT THE REGULATION WILL NOT HAVE A SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESSES,**

The repeal of the DTA energy efficiency standard will not increase the purchase price of the effected appliances over the life of the product. The basis for this determination is supported by the findings in the document titled "Comparison of Savings from the CEC and NTIA DTA Standards."

**EFFORTS TO AVOID UNNECESSARY DUPLICATION OR CONFLICT WITH THE CODE OF FEDERAL REGULATIONS**

The proposed regulations neither duplicate nor conflict with any federal regulation.

There are extensive federal regulations on appliance efficiency regulations adopted by the Department of Energy that preempt the Energy Commission's appliance efficiency regulations. (See 42 U.S.C. § 6291 et seq.; 10 CFR Parts 430, 431.) However, the proposed amendments affect only those appliances that are not covered by these [preempted federal regulations], except for minor clarifications and corrections that do not duplicate or conflict with any federal regulation.





## Comparison Of Savings From The CEC And NTIA DTA Standards

Prepared by the California Energy Commission

August 3, 2007

Digital television adapters (DTAs) are devices that will be required when free over-the-air (or terrestrial) broadcast of analogue TV signals ends in April 2009. At that point, all analogue TVs will require a box to convert the digital signal back to analogue.

The CEC efficiency standard for DTAs was maximum "active" power (i.e., "on") of 8 Watts, and 1 Watt "standby." Table 1 shows the expected energy (kWh), peak (MW), and dollar savings that were expected from the standard based on reasonable assumptions. The comparison assumes the "basecase" DTA would use 12 W in active mode, and 5 W in standby, and that both DTAs would be in active mode 90% of the time, and standby 10% of the time. The table shows that the CEC standard would have saved for each DTA: 35 kWh/year, \$5/year in lower utility bills, and \$26 over the expected five year life of the DTA. Therefore the standard would have saved significant energy, and was cost-effective to consumers, since the incremental retail cost was expected to be less than \$26/DTA.

Subsequent to the adoption of the CEC standard, Congress enacted legislation related to the termination of free-over-the air analogue television signals as part of the transition to all-digital broadcast, which included creation of a program to subsidize the purchase of DTAs, since Congress was concerned about the reaction of consumers to having to purchase DTAs simply to preserve the previous functionality of their TVs. Responsibility for the creation of the program was given to the National Telecommunications Infrastructure Administration (NTIA), which is part of the U.S. Department of Commerce.

As part of the process of creating the definitions for DTAs that would receive the subsidy, some parties recommended that NTIA include efficiency requirements. Walmart recommended that NTIA specify that DTAs must have a maximum standby power of 2 W, and have a feature called "auto power-down," which would automatically put the DTA in standby after a period of non-use, such as four hours. There is an obvious trade-off between the CEC standard and the Walmart proposal: the standby allowance is higher (2 W instead of 1 W), there is no limit on active power, *but* Walmart would require a feature that would result in more hours of operation in standby mode. A deficiency of the CEC standard is that there is no mechanism to require or facilitate use of standby mode. The Walmart proposal, which was ultimately adopted by NTIA, will result in many more hours of operation in standby mode, resulting in potential additional increase in the savings compared to the CEC standard.

Table 2 shows a scenario for reasonable assumptions about hours of operation and power levels, in which the NTIA standard, while it *would allow greater power use* in both active and standby modes, *would save more energy than the CEC standard* because the auto power-down feature would increase the hours of operation in the lower power standby mode. That is, even with higher power allowances in the NTIA scenario, because hours of operation in standby would increase to 60% in the NTIA standard from 20% under the CEC standard, energy use is 5 kWh/year lower in the NTIA scenario.



Table 1

## Energy and Cost Savings: Basecase v. CEC

### Assumptions

<b>DTA use (hrs/yr)</b>	<b>Hours</b>	<b>% hours</b>
Active	7,008	80%
Standby	1,752	20%
<b>DTA power (W)</b>		
Active	12	8
Standby	5	1
<b>Elec cost (\$/kWh)</b>	\$0.15	
<b>Life (yrs)</b>	5	
<b>Number of DTAs</b>	3,000,000	

### Results

<b>Savings/DTA</b>	<b>Basecase</b>	<b>CEC std</b>	<b>Savings</b>
kWh/yr	93	58	35
\$/yr	\$13.93	\$8.67	\$5.26
\$/life	\$70	\$43	\$26
<b>California savings</b>			
	<b>Basecase</b>	<b>CEC std</b>	<b>Savings</b>
kWh/yr	278,568,000	173,448,000	105,120,000
\$/yr	\$41,785,200	\$26,017,200	\$15,768,000
\$/life	\$208,926,000	\$130,086,005	\$78,840,000
MW	36	24	12



Table 2

## Energy and Cost Savings: CEC v. NTIA

### Assumptions

DTA use (hrs/yr)	CEC standard		NTIA standard	
	% hours	hours	% hours	hours
Active	80%	7,008	40%	3,504
Standby	20%	1,752	60%	5,256
DTA power (W)				
Active		8		12
Standby		1		2
Elec cost (\$/kWh)				
	\$0.15			
Life (yrs)				
	5			
Number of DTAs				
	3,000,000			

### Results

Savings/DTA	CEC standard	NTIA standard	Savings
kWh/yr	58	53	5
\$/yr	\$8.67	\$7.88	\$0.79
\$/5 yr. life	\$43	\$39	\$4
<b>California savings</b>			
kWh/yr	173,448,000	157,680,000	15,768,000
\$/yr	\$26,017,200	\$23,652,000	\$2,365,200
\$/life	\$130,086,000	\$118,260,005	\$11,826,000

