Pacific Gas and Electric Company®

January 19, 2009

Mr. Arthur Rosenfeld
Commissioner and Associate Member, Efficiency Committee

California Energy Commission
Buildings and Appliances Office
1516 Ninth Street, MS-25
Sacramento, CA 95814-5512

Subject: PG&E Follow-up Comments to the December 15, 2008 TV workshop; RE: 2008 Rulemaking on Appliance Efficiency Regulations; Docket No. 07-AAER-3-C; Televisions

Dear Commissioner Rosenfeld:

These comments are divided into three parts:

Part 1: General comments supporting the television proposal in the December 2008 CEC Staff Draft Report;

Part 2: Specific comments responding to expressed concerns at the December 15, 2008 workshop; and

Part 3: Recommendations.

We appreciate your consideration for these comments.

Sincerely,

Patrick Eilert
Program Manager, Codes and Standards
Pacific Gas & Electric Company

PART 1: GENERAL COMMENTS SUPPORTING THE TELEVISION PROPOSAL IN THE DECEMBER 2008 CEC STAFF DRAFT REPORT

We continue to express our strong support for the adoption of appliance efficiency standards for televisions (in active mode) by the California Energy Commission Efficiency Committee. An efficiency standard for televisions is an important component to California achieving its energy efficiency and greenhouse gas reduction goals.

We specifically encourage the Efficiency Committee to adopt the proposed levels that are contained in the December 2008 CEC Staff Draft Report. In implementing this two-tiered standard, California will lead the nation and world in advancing the market transformation towards the most energy efficient televisions. The Energy Commission will continue its decades-long track record of promoting energy efficiency through appliance and building standards—such as has been done previously with refrigerators, air conditioners, external power supplies, and many other appliances.

Televisions represent a prominent and growing source of end-use energy consumption. Current growth rates indicate that televisions are on a trajectory to become a dominant—and in some cases the leading—residential end-use. Addressing this growth through a combination of utility incentive programs and energy performance standards will be necessary for California to position itself to meet two major statewide goals:

1. **Reducing California's greenhouse gas emissions to 1990 levels by 2020** as required by law when Governor Schwarzenegger signed Assembly Bill 32, the Global Warming Solutions Act of 2006 (Núñez, Chapter 488, Statutes of 2006).

2. **All new residential construction in California will be zero net energy by 2020.** One of California's "Big Bold Initiatives" as directed by the CPUC on September 18, 2008, when the CPUC Commissioners adopted groundbreaking decision D.07-10-032, mandating California's investor owned utilities (IOUs) work in collaboration with publicly-owned utilities, state agencies, and other stakeholders to prepare a single, statewide energy efficiency Strategic Plan for the period 2009-2020.

The California Air Resources Board (ARB) recently adopted the *Climate Change Scoping Plan* in which it lists the **expansion and strengthening of appliance standards** as its first key element for reducing California's greenhouse gas emissions to 1990 levels by 2020. The scoping plan provides further foundation and motivation to support the proposed television standard: "Future appliance standards should address the energy consumption of electronic devices that offer significant potential for efficiency improvements, such as flat screen TVs".

The proposed standard is designed to encourage manufacturers to provide TVs with equal or better display quality while using significantly less energy than a subset of the least efficient models on the market. Adopting a two tier standard enables California to take advantage of the advanced technologies entering the market, and those being promoted and showcased by several major TV manufactures. In supporting this proposal, we believe that California will be doing what is best for the State, the environment and the consumer.

PART 2: SPECIFIC COMMENTS RESPONDING TO EXPRESSED CONCERNS AT THE DECEMBER 15, 2008 WORKSHOP.

This section responds to the concerns expressed at the December 15, 2008 Efficiency Committee Workshop.

The Consumer Electronic Association's Economic Model

The CEA presented slides titled, "Economic impact of the CEC staff proposal." The presentation showed results of an economic model developed by the CEA with a stated "error of estimate less than 2 percent." The CEA representative characterized the CEC's approach as "brutal" and said there would be a "dire and negative" impact. They showed scenarios resulting in significant tax revenue loss and job loss.

We believe the scenarios shown by the CEA do not accurately represent the statewide impacts. The primary reasons include:

1. The CEA's model did not account for the significant cost savings for Californians as a result of the standard. PG&E's presentation showed that the typical lifetime energy cost reductions range from $46 for a 19" TV to $233 for a 52" TV (see PG&E slides 17-21).

2. The CEA model did not account for Californians redirecting these cost savings towards other goods and services within California. This behavior has been modeled recently in an October 2008 study titled, *Energy Efficiency, Innovation, and Job Creation in California*.[1] Using detailed data on the changing economic structure over the period 1972-2006, the core findings include:

    - Energy efficiency measures have enabled California households to redirect their expenditures toward other goods and services, creating about 1.5 million FTE jobs with a total payroll of $45 billion, driven by well-documented household energy savings of $56 billion from 1972-2006.

    - As a result of energy efficiency, California reduced its energy import dependence and directed a greater percentage of its consumption to instate, employment-intensive goods and services, whose supply chains also largely reside within the state, creating a "multiplier" effect of job generation.

The CEA's Chief Economist, Shawn DuBravac acknowledged at the workshop that the model did not account for these two important issues but they "can make those adjustments easily in the model."[2] We encourage the CEC to consider the current shortcomings in the CEA model and to exercise caution when interpreting the CEA's claimed economic impacts.

Impact on Larger, Feature Rich TVs

A few individuals expressed concern on how the standard would impact larger sized feature rich TVs. However, there was no data presented to substantiate any concerns that this class of TVs couldn't meet the standards. Following the workshop, CEC staff asked stakeholders to provide

[1] Authored by David Roland-Holst, Center for Energy, Resources, and Economic Sustainability, University of California-Berkeley.
[2] Page 131, Hearing Transcript, http://www.energy.ca.gov/appliances/2008rulemaking/documents/2008-12-15_workshop/2008-12-15_TRANSCRIPT.PDF

more specific data to support these claims; PG&E looks forward to evaluating any submitted data and suggesting possible solutions as appropriate.

The key issue is whether manufactures can incorporate energy efficient technologies into these large screen feature rich TVs. Examples and input from TV manufacturers, component suppliers, and industry experts support the position that manufacturers can and will produce these TVs. PG&E has shown several examples in its formal presentations[3] and the manufacturers continued to showcase even more efficient TVs at the recent 2009 Consumer Electronics Show (CES) in Las Vegas. Attributes of larger, feature rich TVs were not specifically defined at the December 15 workshop, but Bob Smith from AVAD expressed specific concerns about high end brands such as Panasonic, Samsung, and Sharp. Thus, it should be noted that at the recent 2009 CES, Panasonic showcased a triple-efficiency plasma TV[4], Samsung released LCD TVs with LED backlights that reduced power consumption by over 40%[5], and Sharp showed a 2009 LCD TV that used one-half the power of a similar-sized 2008 model.[6]

Many manufacturers are incorporating new technologies into their TVs (e.g., panels with increased transmissivity) not only to lower power consumption but to maintain screen brightness while reducing backlight lamps, inverters, and optical films. The result is reduced panel costs combined with reducing power consumption.[7] In a recent essay titled "Going Green Starts with Design", Parker Brugge, the Vice President of Environmental Affairs and Industry Sustainability for the Consumer Electronics Association provides a succinct overview for how manufacturers can meet consumer and state demand for greener products by incorporating energy-saving features:[8]

> In the actual design phase, engineers can further help customers by incorporating energy-saving features into their systems that will automatically limit the product's power intake. Energy saving modes, including sleep and standby, are a proven way to minimize consumption during non-use and essentially do the heavy lifting for the consumer. Furthermore, by considering a product's true energy requirements a designer can avoid calling for more power than is actually needed, thereby eliminating unnecessary electricity usage and costs. A product's power requirements while the product is switched on can also be innately limited by opting for lower power components as opposed to those traditionally used.
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> By instituting eco-friendly design practices, manufacturers can lead the charge on reducing wasteful energy use and limiting harmful e-waste, which simply makes for better business. Consumer demand for greener products that are easy to incorporate into their lives will continue to grow and businesses as well as consumers will continue to make greener choices based on the financial impact. And, in light of the incoming presidential administration's focus on environmental issues, we can expect this trend to continue. The companies that are going green,

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[3] See the PG&E presentations at the July 16, 2008 and December 15, 2008 hearings.
[4] "Panasonic Develops Super High-Efficient Thin-Profile Plasma and LCD HDTV Displays" http://panasonic.co.jp/corp/news/official.data/data.dir/en090108-8/en090108-8.html
[5] "SAMSUNG Ushers In New Era For Flat-Panel Televison With New Category Line-up Of LED LCD HDTVS" http://www.samsung.com/us/news/newsRead.do?news_seq=11932&page=1
[6] "Sharp introduces truly groundbreaking next-generation ultra-thin AQUOS LCD TV series" http://www.echannelnews.com/ec_storydetail.php?ref=417403
[7] See "Increasing LCD Transmissivity, Key to Lower Costs", by Charles Annis, Vice President of Manufacturing Research for DisplaySearch. December 16, 2008. http://www.displaysearchblog.com/2008/12/increasing-lcd-transmissivity-key-to-lower-costs/
[8] Excerpt from December 17, 2008 essay. http://www.environmentalleader.com/2008/12/17/going-green-starts-with-design/

and more importantly helping their customers go green, will be among the most respected and best positioned in the market as the country becomes more and more environmentally focused.

PART 3: RECOMMENDATIONS.

At the December 15, 2008 TV hearing, PG&E highlighted the following points:

- The consumer demand for efficient TVs is high.
- The Energy Star data confirms that most TVs being sold today meet the proposed Tier 1 level.
- Cost-effective Tier 2 TVs are available today without sacrificing functionality.
- Industry is highlighting innovative efficient technologies that further support the Tier 2 level.
- The Tier 2 level will be necessary for California to achieve the goals included in the recently adopted Energy Efficiency Strategic Plan and the Climate Change Scoping Plan.

We submit the following recommendations for the CEC to consider going forward.

1. Given the growing body of evidence supporting the proposed levels and the opportunity to achieve statewide benefits earlier, we recommend that the CEC accelerate the effective dates to the following:
    a. Tier 1: effective July 1, 2010
    b. Tier 2: effective July 1, 2011

2. We recommend that the test method for TV on mode shall be the International Electrotechnical Commission (IEC) 62087, Edition 2.0 - "Methods of Measurement for Power Consumption of Audio, Video, and Related Equipment," *as applied by the U.S. Environmental Protection Agency in the "Energy Star Program Requirements for Televisions, Version 3.0."*

3. We recommend adopting a requirement to ensure that the TV brightness settings are appropriately bright in the setting recommended for Home viewing (or the standard default setting). The CEC asked for input from industry on this issue following the workshop and we look forward to contributing to this process after seeing industry comments.

4. We recommend the CEC concludes this rulemaking in a timely manner and publish final standards as early as possible in 2009.