



Pacific Gas and
Electric Company®



February 12, 2009

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ENERGY STAR EPA

Subject: ENERGY STAR Integral LED Lamps: Proposed Frequency Amendment

The California IOUs and SMUD (California Utilities) are submitting comments in reference to the proposed ENERGY STAR Integral LED Lamps Frequency Amendment dated January 22nd, 2010. The California Utilities would like to thank the Environmental Protection Agency, the U.S. Department of Energy and ENERGY STAR for their commitment to Solid State Lighting and the efforts to insure the success of these new lighting sources.

We in turn invite any questions that you or your staff may have to our comments.

There is great variation in LED product performance and quality. ENERGY STAR has played a significant role with criteria that has represented energy efficiency and quality. Regarding flicker, there are products with clearly visible flicker and there are products with constant-on flicker-free operation. Products with highly visible flicker would not last in the general lighting market-place. From what we have seen, there are many more of the constant-on flicker-free products available that are great performers, such as the ENERGY STAR downlights.

Much like CFL technology in the past, integral LED lamps have significant energy savings potential. Along with the large potential energy savings, there is also a large potential for affecting the long-term perception of LED technology.

Past issues regarding flicker associated with fluorescent technology have embedded the perception that fluorescent lamps all flicker. This perception negatively affected the adoption rate of the technology even after newer electronic ballasts were introduced, operating in the tens of thousands of cycles per second.

We understand cost is a major consideration for emerging technologies to gain market adoption. However, California's Long Term Energy Efficiency Strategic Plan requires that we focus on longer term and persistent energy savings. This requires us to look beyond immediate energy savings strategies, such as reducing cost to increase immediate market penetration of short term products, to long term market transformation strategies for technologies to achieve sustainable and persistent energy efficiency.

In the past, prior to electronic ballasts, we had no choice with fluorescent flicker. Currently, we do have a choice with LED flicker. Based on past experience with the perception of flicker from fluorescent technology and the difficult long term market challenges as a result, we recommend that ENERGY STAR consider the safest route for initial market acceptance of LED technology as a quality energy efficient light source to achieve sustainable and persistent energy efficiency.

The California Utilities appreciate the opportunity to comment and look forward to continued partnership and collaboration for a brighter, more efficient future with LED technology.

Sincerely,

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On behalf of:
California Utility Lighting Program Managers