

Battery Charger Systems Test Procedure

**Presented on behalf of:
Pacific Gas and Electric Company**

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Thursday, May 15, 2008

CEC Efficiency Committee Workshop

2008 Rulemaking on Appliance Efficiency Regulations

Docket No. 07-AAER-3

PRIOR HISTORY TEST PROCEDURE DEVELOPMENT

EFFICIENTPRODUCTS.ORG RESEARCHING & REPORTING on the ENERGY EFFICIENCY of CONSUMER PRODUCTS

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About

Welcome to EfficientProducts.org

EfficientProducts.org is your source for the latest facts, figures, and research on the energy efficiency of consumer products.

Battery Charger Systems
In just the last two decades, product convenience has improved by leaps and bounds with the growth of an entirely new family of products that incorporate batteries instead of relying always on the wall plug to supply electricity...

Computers
The personal computer may be one of the most revolutionary and wildly successful consumer products of all time. In the 1990s, the number of U.S. households owning computers jumped from 14.8 million in 1990 to 60 million in 2001 as consumers embraced digital photography...

Monitors

What's new?
NEW! Final California Battery Charger Systems Test Procedure
NEW! NRDC Study of Set-Top Box Efficiency

What is efficiency?
Efficiency is a measure of return on investment. Every process – whether lighting a light bulb or running a car – requires some amount of energy "investment" to perform, but only a fraction of that energy actually goes on to do useful work like illuminating your room or moving passengers down a highway. The useful work performed divided by the original total energy investment (usually expressed as a percent) is the energy efficiency.

Procedure in development for four years, representing input from dozens of stakeholders, including EPA ENERGY STAR and DOE

Updated Version 1.2 as of April 22, 2008 available at

www.EfficientProducts.org/bchargers/ along with comment and response document for final revisions



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Test Procedure V1.2 Changes

- ▶ Clarify definition of EPS (sec III.N)
- ▶ Specify uncertainty for energy measurements (sec IV.B)
- ▶ Refine wording in battery selection Table B (sec V.C)
- ▶ Add provisions to allow for battery discharge at the output of battery protective circuitry (sec V.F)
- ▶ Change reporting for modes not applicable to a product (sec VII)



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Recommendations for Title 20 (CEC-400-2008-014-SD.pdf)

- ▶ In sections 1601, 1602 and 1604: Make a subsection for Battery Charger Systems separate from EPS and A/V equipment
 - Some definitions are similar but not identical
 - Separation avoids confusion and possible loopholes
- ▶ In section 1602, define **Battery Charger System** as **“a device which charges one or more batteries, together with those battery(ies).”**
 - The term “Battery Charger System” is used broadly, even if only some of the systems are subject to standards
 - Specification of which Battery Charger Systems are subject to standards should be included in Section 1605



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Recommended Action

- ▶ **Adopt the Battery Charger Test Procedure version 1.2**
 - Provides proven and reliable techniques for measuring energy consumption in all operating modes

- ▶ **Call for data from all interested parties, to be submitted by June 30, 2008**
 - Seeking data on all categories of products to ensure a representative sample
 - Particularly interested in test data on large chargers, including 3-phase and over 2 kW
 - Also interested in test data on any products with special requirements



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