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October 13, 2008

Ms. Melinda Merritt
Mr. Harinder Singh
California Energy Commission
1516 9th St.
MS 25
Sacramento, CA 95814-5512

DOCKET	
08-AAER-1B	
DATE:	10/13/08
REC'D:	10/17/08

Subject: California Energy Commission Test Procedure for Battery Chargers
Docket: 08-AAER-1B

Dear Ms. Merritt and Mr. Singh.

Thank you for the opportunity to comment on the CEC Test Procedure for energy measurement of battery chargers within the 45-day comment period on this regulation. The Association of Home Appliance Manufacturers (AHAM) represents producers of battery rechargeable appliances and battery chargers used throughout the home. The Power Tools Institute (PTI) represents North American producers of consumer and industrial power tools. Both AHAM and PTI have participated in the CEC rulemaking process for external power supplies and battery chargers since the beginning and we feel uniquely qualified to make suggestions on the test methods for these products.

We appreciate that the test method for battery chargers used by CEC will cover a very broad array of products, well beyond just appliance battery chargers. AHAM and PTI have attended many meetings and commented throughout the process. Several of the changes we have proposed have been adopted into the latest test procedure Eco Version 2.1.4.

We would like to commend the Commission both on your success in nurturing a process during the discussion and in development of the test procedure that encouraged diverse points of view and sought consensus. We believe your oversight has had and impact on the integrity and usefulness of the test procedure and we hope that future such discussions will be as collaborative as this has been.

We have the following comment on the test procedure:

Power factor

We have previously made comments that the premise of measuring power factor for the purpose of regulating presumed power losses in the distribution wiring of a building or power distribution system represents an extraordinary departure from most appliance energy efficiency regulation currently in force within California. Embarking on this pathway should only be undertaken by carefully considering the impact of such a decision both in terms of public policy and technical substantiation. To date, no real evidence has been presented by PG&E or Ecos Consulting as to why this measurement or limit would be necessary. **Non-displacement power factor** has been a topic of interest internationally with regard to the impact that power line harmonic currents may have upon the integrity of the power distribution system but not with respect to individual product energy efficiency. It is unclear why this test method includes these measurements while the test procedures for other products regulated by the Commission have not. In addition, the method of measuring the power factor in the test procedure is flawed and inconsistent with well-established international test standards for measuring non-displacement power factor loads. Other representatives who serve on IEC and IEEE committees have pointed out the same thing. While as appliance manufacturers, we cannot comment on the impact of the additional energy consumed due to power factor for other than appliance battery chargers, we can state with assurance that the additional power loss in appliance battery chargers (below 500W input) due to lowered power factor is inconsequential as a proportion of the charger input power.

As was pointed out by Commissioner Rosenfeld at the recent hearing, the power factor depends on the impedance of the line. Therefore, if one is going to accurately measure the power factor, it is important to use the proper source impedance. Dr. Bendt of Ecos Consulting has constructed a test procedure with no defined source impedance, and thus is unacceptable. Defining the source impedance is important because it is the basis for the anticipated residential wiring losses. The source impedance in the home can vary according to the type of and quality of home wiring, as well as the location of the receptacle on the branch circuit. The actual losses could be considerably different from the losses predicted from a single source impedance. We suggest that PG&E conduct additional studies of the home wiring to establish the range of impedance and the impact of non-displacement power factor before any further discussion of testing of battery chargers or other products.

AHAM has been supportive within the framework of the U.S. Department of Energy of modifications to the U.S. DOE battery charger test procedure. At a recent workshop AHAM and PTI called on DOE to modify the federal test procedure to include an E24 active mode measurement, similar to what is being proposed in the CEC test procedure. We believe this will make a great step forward in harmonizing the test procedure between California and DOE.

The next phase of the regulatory agenda will be for Ecos Consulting and the manufacturers to gather data. AHAM requests that all data collection include the energy according to the type of battery charger: detachable, integral and swappable.

Thank you for the opportunity to comment on the proposed test procedure.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne Morris". The signature is fluid and cursive, with the first name "Wayne" being more prominent than the last name "Morris".

Wayne Morris
Vice-President, Division Services

A handwritten signature in black ink, appearing to read "Robert G. Stoll". The signature is written in a cursive style, with the first name "Robert" and last name "Stoll" being clearly legible.

Robert G. Stoll
Technical Director
The Power Tool Institute