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February 11, 2011

Via E-Mail

Mr. Harinder Singh
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

hsingh@energy.sstate.ca.us

Re: Docket No. 09-AAER-02; Battery Charger Proceeding Data Request

Dear Mr. Singh:

The Association of Home Appliance Manufacturers (AHAM) respectfully submits the following comments and data in response to the California Energy Commission's (CEC) Battery Charger Proceeding Data Request (January 31, 2011) ("Data Request").

AHAM represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. In the U.S., AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The factory shipment value of these products is more than \$30 billion annually. The home appliance industry, through its products and innovation, is essential to U.S. consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the industry contributes significantly to U.S. jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. New appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

AHAM appreciates that CEC has made some effort to obtain data because accurate and transparent data must be the foundation of any decision to initiate a rulemaking. But, we have a number of serious concerns with the Data Request, not the least of which is that we question whether the timeline identified in the Data Request will provide CEC with enough time to properly and thoroughly review and consider any data it may receive. And, we continue to believe that a CEC rulemaking on battery chargers is a waste of CEC resources given that the U.S. Department of Energy (DOE) is engaged in a rulemaking on this very same product that, per a statutory mandate (P.L.110-140), must be completed by July 2011, and will apply to the entire country.

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I. Concerns With The Data Request

AHAM has a number of serious concerns with the Data Request, which are specifically outlined below.

A. Insufficient Time for Response

The Data Request is dated January 31, 2011, but CEC did not make it publically available to stakeholders until late on February 2, 2011. CEC requests three broad categories of data, and gives stakeholders only about 12 business days to collect and submit that data. This is simply not enough time to provide accurate and thorough data, especially given the wide breadth of potentially covered products for which data would need to be generated, gathered, potentially aggregated, and submitted to CEC. Industry is glad to work to gather and submit these data where possible, but it needs more time to do so. In particular, in order to be able to provide data, there are a number of questions we need answered by CEC:

- Should data be submitted on a per-product basis or some other basis?
- How does CEC define “alternative product duty cycles” for purposes of the Data Request?
- How does CEC define “alternate product lifecycle” for purposes of the Data Request?
- How does the data CEC is requesting differ from that already available in the DOE Technical Support Document (TSD) in Docket No. EERE-2008-BT-STD-0005, much of which was submitted by the very same stakeholders involved in this rulemaking? If CEC needs specific data that cannot be found in the TSD, stakeholders need to know exactly what that is.

There will surely be other questions that arise during the collection process, as well. Furthermore, because CEC does not have the same confidentiality protections in place as DOE, industry, where it is able to gather data, will likely need to de-identify and aggregate it before submitting it to CEC.

CEC claims in the Data Request to have previously solicited data from stakeholders. The “November 17, 2008 letter” mentioned in the Data Request, however, was in the external power supply rulemaking, not the battery charger proceeding. When CEC initially stated that it would welcome data, stakeholders, including AHAM, specifically requested details from CEC on the data it would like to have. At the October 11, 2010, meeting, AHAM’s Vice President, Wayne Morris, and other AHAM members agreed that if CEC would specify what data they needed, industry would do its best to provide it. Since October 11, CEC did not provide such details until this Data Request. And, it is not accurate to say that industry did not provide data. In fact, AHAM specifically referenced the DOE TSD in Docket No. EERE-2008-BT-STD-0005. Companies saw no reason to submit exactly the same data they already submitted to DOE as part of that rulemaking given that the data is publicly available and the CEC rulemaking covers exactly the same products (and is likely to soon be made obsolete by the DOE rulemaking). Accordingly, CEC cannot justify the short timeframe given for response to the Data Request by claiming that CEC has previously sought this data when data was provided and further information was requested by industry that was not met with any response from CEC.

In order to allow sufficient time for CEC to answer the above questions and for industry to generate, collect, aggregate, and submit data where possible, AHAM requests that CEC extend the deadline for submitting data in response to the Data Request to no earlier than March 31, 2011, and provide answers to questions that have been asked to ensure an accurate data submission.

B. CEC Must Use Data for an Accurate Rulemaking

Furthermore, in the Data Request, CEC states that “Energy Commission staff plans to release a Staff Report containing proposed battery chargers standards by mid-February of 2011.” It is unclear how CEC proposes to request data by February 18, 2011, and then actually use it when it intends to publish a report with proposed battery charger standards by “mid-February.” CEC should allow sufficient time to do a meaningful review of the data it receives in response to the Data Request. Such a review should include meetings with stakeholders to discuss the data. Moreover, CEC should not prejudge the rulemaking and issue its planned Staff Report or hold its Staff Workshop until it has thoroughly reviewed the data received.

C. Lack of Transparency and Openness

We continue to be concerned about the lack of transparency and openness surrounding the Codes and Standards Enhancement Initiative (CASE) study. Industry members asked a number of questions of Ecos Consulting during the October 26, 2010, conference call and received no answers. AHAM followed up by providing those questions in writing on November 1, 2010. As of the date of this letter, we have received no response to those questions. The responses to those questions are a critical step in the transparency and openness of the rulemaking process, especially because the questions seek to understand the underlying data. It is untenable that CEC expects industry to now provide data to respond to the CASE study when industry does not (and indeed cannot) understand the data that underlie that study. Those requesting and considering the rulemaking should be the ones to provide accurate and available data to which others can respond. And part of that responsibility is sharing the potential justification, in full detail, with the potentially regulated parties. Until that is done, industry cannot be expected to meaningfully respond. Accordingly, we again request answers to the questions we submitted by letter of November 1, 2010. Those questions are attached to this letter at Attachment A.

II. Response To The Data Request

In direct response to the Data Request, we attach, at Attachment B, DOE’s TSD in rulemaking Docket No. EERE-2008-BT-STD-0005. These data are superior to the CASE study because the data are more current and much of it comes from stakeholders, such as AHAM members. In addition, in keeping with the prescribed federal rulemaking process, the development of the data for the TSD was done through an open and transparent process, and the full supporting data are available to the public. We also submit AHAM’s comments on that TSD, attached at Attachment C, and note that DOE may revise their technical thinking based on these comments and comments from other stakeholders.

As these documents demonstrate, we reiterate that DOE is engaged in a rulemaking on the very same products that are within the scope of the proposal from Ecos and PG&E in the CEC battery charger proceeding. Under the terms of the Energy Independence and Security Act (EISA) of 2007, DOE must complete a rulemaking on Battery Chargers by July 2011. DOE is well in line with that timetable—it has held scoping workshops, modified the test procedure, and held a Determination workshop on October 13, 2010. In addition, DOE has released over 794 pages of technical support and appendices to support its rulemaking. We expect that the final DOE test procedure will soon be issued. The CASE report, which is dated October 2010, states that “the recommended compliance year for small standards is 2012, allowing manufacturers approximately two years to source components and adjust designs. Electronic product design cycles typically run anywhere from one to two years . . . , allowing ample time for small standard criteria to be built into product specifications.” (CASE report, page 47, paragraph 8.1). Given that it is now 2011, and no rulemaking has been initiated, this further illustrates that CEC should not proceed with a standard that, based on its own report, would not go into effect until about the same time as the DOE standard which will cover the very same products.

As we have previously stated, CEC should only pursue a rulemaking on battery charges for those classes of products not being regulated by DOE. Per statutory mandate, DOE’s regulation for battery chargers will be complete in July 2011. Neither CEC nor Ecos has presented information to show that there would be additional (or any) benefits in CEC issuing its own rulemaking on battery chargers so close in time to final DOE standards, especially across the wide variety of consumer battery charger products used by many personal, kitchen, and floor care appliances. We are mindful of the need to save energy in California and other states. But the most effective way to accomplish that goal in this case is through a thorough DOE rulemaking, and not through two parallel rulemakings at the state and federal level on essentially the same timeline for the same products. **Dedicating limited monetary and other resources, especially as we struggle to improve the economy, to a regulation that will soon be superseded by DOE is not a prudent use of CEC’s (or anyone’s) resources.** CEC should not, therefore, continue with this rulemaking process for battery chargers that are the subject of the DOE rulemaking.

Best Regards,



Jennifer Cleary
Director, Regulatory Affairs

cc: Mr. Michael Leاون

ATTACHMENT A



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November 1, 2010

Mr. Michael Leao
Mr. Harinder Singh
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Dear Mr. Leao & Mr. Singh:

Thank you for arranging the Webex Seminar on October 26, 2010. It is very important for industry to have an opportunity to ask questions and receive answers regarding the CASE report. We were very disappointed that Ecos Consulting, PGE and other IOUs in California were unable to answer many of our questions. In order to continue the tradition of the California Energy Commission to provide transparency and openness in rulemakings, we are asking many of these questions again and requesting the data behind this.

We do appreciate the fact that you have offered to obtain answers to our questions. We are submitting these questions early so that we might be able to receive the answers before we are required to submit our comments.

The following are the questions that were raised on October 26, 2010 for which we did not receive answers:

1. Ecos consulting used a financial mark-up methodology to go from a raw component part cost to the change in the Manufacturer's Selling Price (MSP). For the increases used by Ecos, we would like to know what the increases are and how they are developed at each stage. For example, there are likely cost increases from the component part supplier to the Printed Wiring Board manufacturer, and from the PWB manufacturer to the wall-adaptor or battery charger manufacturer, and from the battery charger manufacturer to the OEM appliance manufacturer and from the OEM appliance manufacturer to the MSP. The U.S. Department of Energy has included a complete break-down of their methodology on pricing increases and we are interested in seeing how this compares to the one used by Ecos.

2. Do the first costs on Table 18 include markup? If so, please explain the data used.
3. Does the markup include non-recurring engineering and manufacturing (NREM) expenses, such as energy testing, research and development costs, assembly line fixtures and testing equipment, safety certification, increase in size of battery charger housings to accommodate components, changes to production molds, changes to assembly lines and other capital improvements? If so, how much of the total markup was used for NREM? Did this estimate also include possible increases in packaging size to accommodate different sized battery chargers?
4. Ecos assumed that the differences between units that met the new proposed standards and those that did not were based on a difference in design changes. There are many different categories of battery chargers and battery rechargeable appliances. We would like to have more explanation of how Ecos “built-up” designs to show that such design options are applicable to all categories of products.
5. Ecos appears to have made assumptions about the quantities of components which will be purchased. As some quantities of shipments of certain classes of products are low and some are high, we would like to know what quantities were assumed for each class in order to move from the component part cost to the MSP.
6. Did Ecos assume that all battery chargers could use this technology change or were there different technology changes for different classes of products?
7. For small voltage products (for example 1.2 to 1.5 V), did Ecos assume that the voltage to run some IC chips are not available at very low voltages? Did Ecos include measurements and recommendations on small voltage products? Did Ecos assume that the energy to the system would need more voltage to drive the IC chips than is needed to charge the battery? Did they test to verify that the technologies that now meet the proposed regulation would work for low voltage products? If they did verify these would work, is there still an energy savings? If so please provide the data.
8. The usage patterns in the Ecos study appear to be based on an older study of consumer products usage. How many products from full sized vacuum cleaners, stick vacuums, hand held vacuums, shavers, hair clippers, trimmers, toothbrushes, can openers, cordless mixers were included in the summary used to develop the usage pattern assumptions?
9. Ecos noted that they assumed all battery chargers had charge control (page 6, top of page). Would Ecos please explain how they define charge control and were they able to measure or determine the function of charge control in the battery chargers they studied? If yes, could they share with us the procedure and process used to define charge control?
10. Recommendation 8.1 contains a suggestion that the regulation take place in 2012 which is two years from date of enacting. Would Ecos please share the timeline they have assumed for various parts of this two-year time period?

11. Does the timeline include time for obtaining testing in a CEC approved laboratory for energy measurements, including queue time? Also, does the total time include time for testing by a Nationally Recognized Testing Laboratory (NRTL) including queue time? How much time is estimated for each? For those devices that are Federally regulated as medical devices, does the timeline include time for FDA approval, including queue time? Did they verify that the technology to meet the proposed regulation is acceptable as it is to meet all the strict safety and EMC requirements for medical devices? If so please provide the report that confirms this.
12. Ecos said that the average savings shown includes the assumption of the power factor limit. Would Ecos please provide a breakdown of the average savings to show what amount and percentage of the total amount is due to power factor limit, especially for the units under 100W?
13. Table 6 includes information on the percentage of time that a product is unplugged. Would Ecos provide to us the information on which this estimate is made, especially for personal care appliances? Is this assumed on all the market or a percentage? If a portion, how was this percentage arrived at?
14. For the scatter-plots shown in Figures 5, 6, and 7, would Ecos please re-run these tables for battery chargers that have State Regulated EPS (under California definition) that comply with the regulations currently in effect.
15. For the data in figure 5 only the Lithium products meet the proposed regulation. Was it assumed that all cell chemistries could use the same technology to meet the proposed regulation? If so were the costs increases to the product also based on this technology? Were any prototype products built with other cell chemistries to verify your assumptions? If this is the case, did Ecos factor in the new regulations for the UL safety standards on lithium ion batteries and the U.S. Department of Transportation regulations on shipments of lithium batteries?

Thank you for your help in obtaining the necessary information.

Sincerely,



Wayne Morris
Vice President, Division Services

ATTACHMENT B

As AHAM's Attachment B, we formally incorporate by reference into the CEC record, the documents listed below. Due to file size, and availability of these documents on the internet, we provide the following link where these documents can be downloaded:

http://www1.eere.energy.gov/buildings/appliance_standards/residential/battery_external_preliminaryanalysis_tsd.html#tsd

1. Technical Support Document

- Title Page
- Table of Contents
- Executive Summary
- Chapter 1. Introduction
- Chapter 2. Analytical Framework, Comments from Interested Parties, and DOE Responses
- Chapter 3. Market and Technology Assessment
- Chapter 4. Screening Analysis
- Chapter 5. Engineering Analysis
- Chapter 6. Product Price Determination
- Chapter 7. Energy Use Analysis
- Chapter 8. Life-Cycle Cost and Payback Period Analyses
- Chapter 9. Shipments Analysis
- Chapter 10. National Impact Analysis
- Chapter 11. Life-Cycle Cost Subgroup Analysis
- Chapter 12. Preliminary Manufacturer Impact Analysis
- Chapter 13. Utility Impact Analysis
- Chapter 14. Employment Impact Analysis

2. Reports

- Environmental Assessment
- Regulatory Impact Analysis

3. Technical Support Document, Appendices

- Appendix 3-A Battery Charger and External Power Supply Applications
- Appendix 3-B Battery Charger and External Power Supply Efficiency Programs
- Appendix 3-C Evaluation Methods for Differentiating Wall Adapters with Charge Control
- Appendix 5-A External Power Supply Test Data
- Appendix 5-B Battery Charger Test Data
- Appendix 5-C Manufacturer Interview Guide
- Appendix 7-A Battery Charger and External Power Supply Usage Profiles

- Appendix 7-B Unit Energy Consumption for Battery Chargers and External Power Supplies
- Appendix 8-A User Instructions for the Life-Cycle Cost and Payback Period Spreadsheets
- Appendix 8-B Supplementary Life-Cycle Cost and Payback Period Results
- Appendix 8-C End-Use Application Inputs for the Life-Cycle Cost Analysis
- Appendix 8-D Residential Discount Rate Distributions
- Appendix 10-A Net Present Value Under Alternative Electricity Price Scenarios
- Appendix 12-A Manufacturer Impact Analysis Interview Guide
- Appendix 15-A Social Cost of Carbon For Environmental Assessment Under Executive Order 12866

4. DOE Analytical Tools

- Market Assessment and Markup Spreadsheet
- Product Survey Spreadsheet
- Energy Use Analysis Spreadsheet
- Life-Cycle Cost and Payback Period Analyses Spreadsheet
- Shipments Analysis and National Impact Analysis Spreadsheet

ATTACHMENT C



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October 29, 2010

Ms. Brenda Edwards
U.S. Department of Energy
Building Technologies Program
Mailstop EE-2J
Energy Conservation & Test Procedures for Consumer Products and Commercial Equipment,
EE-RM/TP-05-500
1000 Independence Avenue SW
Washington, DC 20585

Mr. Victor Petrolati
U.S. Department of Energy
Building Technologies Program
1000 Independence Ave. SW
Washington, DC 20585

Subject: EERE-2008-BT-STD-0005
Regulation Identifier Number (RIN) 1904-AB57

Dear Mr. Petrolati and Ms. Edwards:

We would like to express our appreciation to the Department of Energy for the opportunity to comment on the Determination Phase and Technical Support Document on the rulemaking on Battery Chargers.

The Association of Home Appliance Manufacturers (AHAM) represents manufacturers of major, portable and floor care home appliances, and suppliers to the industry. AHAM's membership includes over 150 companies throughout the world. In the U.S., AHAM members employ tens of thousands of people and produce more than 95% of the household appliances shipped for sale. The factory shipment value of these products is more than \$30 billion annually. The home appliance industry, through its products and innovation, is essential to U.S. consumer lifestyle, health, safety and convenience. Through its technology, employees and productivity, the

industry contributes significantly to U.S. jobs and economic security. Home appliances also are a success story in terms of energy efficiency and environmental protection. New appliances often represent the most effective choice a consumer can make to reduce home energy use and costs.

AHAM is also a standards development organization, accredited by the American National Standards Institute (ANSI). The Association authors numerous appliance performance testing standards used by manufacturers, consumer organizations and governmental bodies to rate and compare appliances. AHAM's consumer safety education program has educated millions of consumers on ways to properly and safely use appliances such as portable heaters, clothes dryers, and cooking products.

I. Overall Summary:

We would like to compliment the Department and its consultants on a very thorough review of the Battery Charger Technical Support Document and additional materials. It is quite evident that this is indeed a very complex issue and one of the few horizontal rulemakings that has been attempted which involves thousands of final products, each with unique characteristics, different energy consumption values and different usage patterns by consumers. The Department has therefore spent more time on the technical matters and test procedure than possibly was anticipated in 2005.

We appreciate the Department recognizing that there are significantly different electrical and usage characteristics of products even within the Motor Operated and Detachable Battery (MADB) types of battery chargers which fall under the scope of our Association. We particularly appreciate that the Department has recognized inductively charged products are significantly different and deserve to be treated as a special class. We encourage the Department to continue to study this issue and to craft a way that the MADB products are not double-regulated.

We acknowledge that the decision on MADB products is complicated but Congress was clear that the battery chargers for these MADB products were not the same as an External Power Supply (EPS). Therefore, we urge the Department to adopt a designation of MADB products such that they are battery chargers and will *only* be tested and regulated as battery chargers. This is based on the fact that the products will either have an end-product that is primarily motor-operated, or will use a detachable battery pack, and will be shipped with a battery charger. At the recent workshop, the Department suggested that there may be problems in enforcement of such a regulated class if the wall-adaptor would be shipped separately from the end-product. In the case of MADB products, we believe this will be a rare occasion. But, even if this does occur, all wall-adaptors for battery chargers will be marked with the end product part number for which

it is intended to be used. This is a requirement of the safety certification organizations. If a manufacturer needs to import wall adaptors which are part of a battery charging system, separate from the full battery charger system, the reference on the marking of the wall-adaptor can be used to show that it is part of a battery charging system. We agree in order to eliminate any “loop holes,” if the Wall adaptor is not marked to be used with a battery product, then the Department should treat that wall-adaptor as an External Power Supply and require its compliance accordingly.

It should be noted that the Final Rule for the Test Procedure of Battery Chargers has not been issued at this time. Therefore, it is difficult for manufacturers to test products under the proposed CSL’s without a final test procedure.

II. Effective Date:

The Energy Policy and Conservation Act (EPCA) does not have a specific effective date or the typical lead in period for a battery charger standard. The law states that a final rule must be issued by July 2011--but not when it will be effective. This provides DOE considerable discretion to balance the need for time for design and investment with the interest in a standard’s effectiveness as soon as possible.

We recommend that, assuming the final rule is promulgated on or about July 1, 2011, the effective date should be July 1, 2013 for small appliance battery charger products. It might be necessary to have additional time for some other classes of products, depending on their testing or regulatory lead-times. The 24-months we suggest is less than the three years which AHAM usually requests, but under the unique circumstances of this rulemaking we agree to the above effective date. Further, an earlier federal effective date is needed to ensure all 50 states are consistent, which aligns well with EPCA, the Congressional, and DOE recognition that one of the laws principal goals of the Department of Energy is a uniform national standard. This would also prevent balkanization of the US marketplace.

III. Wall-Adaptors Should Be Regulated, But Not Twice

We believe that a serious error has been made in the suggestion by the Department that the wall-adaptors of a battery charger are both an External Power Supply and at the same time part of a Battery Charger System. AHAM and other entities such as the Power Tools Institute have commented for over five years that the wall-adaptor of a Motor Operated and Detachable Battery (MADB) Battery Charging System is an integral part of a battery charger, and not an EPS. This is especially true because the voltage and current outputs need to be correct and matched to the unique conditions of the battery charging circuit. The Department seems to be struggling to define the wall-adaptor of a battery charger and also struggling to know how during enforcement

activities the Department will know whether a product at retail is the wall-adaptor of a MADB battery charger or an external power supply. AHAM believes the definition that is given in the name should be sufficient. This is a battery charger for a product that is primarily motor-operated and/or it contains detachable batteries. Most of these products are sold at retail with pictures of the product, its charger, and description of its cordless, rechargeable functions prominently displayed on the retail carton or internet catalog descriptions. It will be quite evident to anyone within the Department or enforcement staff that a product is primarily used for charging batteries of a motor operated appliance and/or it uses detachable battery packs that separate it from other types of wall-adaptors for consumer electronics which function as EPS. While the issue of charge control was not a delineating factor in all wall-adaptors for battery chargers, the very nature of the motor-operated end products in addition to the products bearing detachable battery packs should be sufficient to separate them into a separate class. As stated in our summary, to help eliminate any possible “loop hole” we are agreeing that the wall adaptor must be marked to reference the battery operated product it is to be used with. If it is not marked, it is to be regulated as an EPS.

There are two important factors in this area. First, Congress has made clear that the EPS and BC category should be regulated by the federal government. Second, double regulating a product for the same characteristic – energy – and even worse to do it in a manner where it is unclear into which categories products or components fall makes no sense.

We have explained many times that unlike many external power supplies, a battery charger and an appliance, (for example a portable vacuum cleaner) are completely integrated. In such a case, a battery charger is not a device purchased off the shelf, but rather, by design, it is part of the appliance as a whole. If regulation divides the overall battery charging system into the part which goes into the wall receptacle and the part where the product is recharged, then that will only lead to confusion. In addition to the confusion, manufactures maybe in constant redesign mode if the EPS and battery charging standards change at different times. We also do not know if future standards levels will make it impossible to meet both regulations at the same time since there is no correlation between the two regulations.

Fortunately, there are several ways to regulate this product without confusion. First, the law makes clear in EPCA Section 321(36) -- the definition of external power supply -- that a “Class A external power supply” does not include any device that “powers the charger of a detachable battery pack or charges the battery of a product that is fully or primarily motor operated.” The law is clear. Our products, such as that incorporated in a portable vacuum cleaner, contain devices that charge the battery of a product that is fully or primarily motor operated. This does not mean that it is exempt from regulation because it clearly is a battery charger, meaning “a device that charges batteries for consumer products, including battery chargers embedded in other consumer products.” This is not escaping regulation; it is simply a classification.

If for some reason this exemption from EPS coverage is not sufficient then as described in the May 14, 2010 Federal Register, “Option B” or “Modified Option B” could achieve the same purpose. Under option B, the wall adaptor of a MADB would not be considered EPS, as long as it powered a battery charger. We are very clear about the type of products we are discussing such as wall-adaptors for small personal care appliances, cordless rechargeable vacuums, stick vacuums, and kitchen appliances.

We do not understand the comment on page 27172 of the Federal Register that this approach is a problem because “it would create two definitions of EPS which would prevent one from readily identifying a particular wall adaptor as being a EPS until it is known whether it powers the charger of the detachable battery pack or charges the battery of a product that is fully or primarily motor operated.” What does it mean or what is the significance of “preventing one from readily identifying the particular wall adaptor as being an EPS?” DOE will have no problem monitoring compliance of the law because the evaluation and testing will be done for the component as incorporated in the overall product.

As we mentioned before, for MADB products manufacturers use a marking system on the wall-adaptor that references the end-product to which it is connected. This is what the American National Standards-Underwriters Laboratories end product safety standards currently require. This is done to help prevent people from using EPS or a wall-adaptor for a battery charging system that has not been designed to properly charge the battery operated appliance.

If for some reason the Option B or modified approach B does not work, and DOE cannot see its way clear to just a simple exclusion from EPS coverage (and we are not seeking exemption from regulation), then we suggest DOE use the provision in EPCA Section 325q -- special rules for certain types of classes of products -- that allows a separate class and separate standard if the product has “a capacity or other performance related features which other products in such type (or class) do not have and such feature justifies a higher or lower standard from that which applies and will apply to other products which are in such type (or class).” DOE is required to consider other factors such as the utility to the consumer of the feature. In this case, whether it is classified as an EPS or a BC, the point is that DOE will create a separate class and have as a standard and test procedure, testing and requirements that are appropriate to this component as incorporated in these types of products.

Surely, between these, and possibly other, options DOE can provide federal regulation in a clear manner that will avoid confusion to regulated industry, regulators, and other interested parties, and also avoid the testing burdens and functional restrictions of double regulation. If the Department pursues regulating wall-adaptors as both EPS and part of a battery charger system, the product would be evaluated twice. But, more importantly, the evaluation would be different.

IV. Measurement of Active Mode Energy of MADB Chargers as EPS is Inaccurate

The proposed method of measuring the energy use of a wall-adaptor for a battery charger by an EPS test method is inaccurate. To do so, the Department would be testing units inaccurately.

The Active Mode measurement within the EPS requirement is different from the Active mode measurement in the battery charger test procedure. In the EPS test procedure the wall-adaptor is loaded to 25%, 50%, 75%, and 100% of the input. Then these values are averaged. However, in the E24 measurement, the product is loaded as it performs its battery charging function and is measured accordingly. The testing would be different and the testing burden is doubled. Manufacturers would need to perform all energy testing as both an EPS and part of a BCS for all models of battery chargers. Since the wall-adaptor is never used in the manner tested (that is to say, at some arbitrary average level of 25%, 50%, 75%, and 100% of rated input), requiring testing to this procedure DOES NOT meet the Department's obligation of testing a product in a *representative manner* to its use.

V. Products that are Infrequently Charged

A large number of portable appliances have battery chargers which are not left attached to the 120V supply constantly. Many of these products are infrequently charged.

Appendix 7a shows numerous products charged less than 1 hour a day. Indeed, we mention that shavers, beard/mustache trimmers, hair clippers and rechargeable toothbrushes are shown to be charging from 0.14 to 0.26 times per day. We submit that the percentage of time for other personal care products, such as beard and mustache trimmers, hair clippers, etc. is likely significantly less than the figures shown. We therefore believe the "infrequently charged" products should be treated differently. The Department made a statement at the public hearing on October 13 that usage patterns do not constitute a reason for a different class. We do not agree with this assessment. In fact, the Department has always used the criteria for adding a new class of products as a significant characteristic, design, or function which affects energy use. The primary characteristic of these products is the fact that they are infrequently charged. In order to adequately measure the energy savings potential over the UEC, year, or lifespan of the product, DOE needs to separate these infrequently charged products into a unique class. In this way, the energy measurements will be representative of the way that the products are used. We request that the Department re-evaluate this decision.

VI. No Load Power

In addition to improvements in the average active mode energy efficiency of EPSs from one CSL to the next the Department is also proposing matched decreasing values of the allowable no-load power at each CSL. While the Department has evaluated the impact of each CSL in aggregate by taking the use factors into account, it has not justified the value of decreasing the no-load levels at each CSL. In particular, small no-load differences between CSLs are clearly overwhelmed by the efficiency gains at each CSL for higher nameplate power EPS. While the Department indicated that the use of matched pairs is a useful principle in simplifying the establishment of CSL's, this is of little solace when manufacturers must go through great efforts, and considerable cost to the consumer, to achieve a standard level that makes no practical difference to the energy savings experienced by the consumer in use. The value of using decreasingly lower no-load limits should be based upon the anticipated use of these wall-adapters in practice.

For example, there has been much testimony about the use of the many integral battery pack products that are provided with wall-adapter battery chargers. These products, often referred to as infrequently charged, are best described by table 7.7 in the TSD wherein it is shown that these products are anticipated to be unplugged when not in use and therefore savings in no-load consumption has no bearing on actual energy savings.

The very nature of EPSs that power motor operated appliances (the MA of MADB), is that they categorically qualify as infrequently charged and therefore should have a unique CSL's. These CSL's should have no decrease in no-load limits beyond the EISA levels for higher CSL's. The idea of applying the Class A CSL's to MADB cases is not appropriate in this particular case and, upon further analysis, any MADB case.

AHAM would suggest that the Department, as indicated previously, should exclude MADB adapters from regulation as EPS's. If they elect not to, then the no-load standard should be held at the CSL 0 level.

VII. Use of Proprietary Technology

We believe, based on our review of the TSD Framework document, that there are concerns that the proposed rule could result in the de facto requirement to incorporate proprietary, i.e., patented, technology, especially in the inductively charged and smaller (less than 100W) battery chargers. This, obviously, would be a serious problem—companies either would be barred from manufacturing or would need to license technology to comply with the standard, subject to royalties and other terms of a provider. It has long been federal policy, as exemplified in OMB circulars, for example, that federal requirements should not be set that favor or require particular

proprietary technology. Any other approach would be anticompetitive and add considerable burden to the regulated parties, which here include many smaller companies. It does not appear that the TSD for these inductively charged and smaller battery chargers have taken this into account. Dept needs to investigate.

AHAM suggests that the Department further explore this situation.

VIII. Usage Patterns

We commend the Department for considering the usage patterns of products in order to correctly estimate the energy used, Life Cycle Cost, and setting of standards. We believe this is important to develop energy profiles and standards levels that are representative of the way that the product is actually used. The Department used the usage patterns in the development of the Unit Energy Consumption (UEC) calculations and in developing different approximations of the UEC. In Appendix 7a, the Department presented the usage patterns for 67 External Power Supplies and 57 Battery Chargers. The Department presented a formula for calculating UEC that would utilize usage patterns. AHAM continues to support using usage patterns for determination of the energy use of each product. We believe, however, that the percentage of time in each of the Active/Maintenance, No Battery, and Unplugged states need to be revisited and perhaps changed. The time estimations for the time in the “unplugged” state need to be adjusted.

IX. Averaging

By averaging the energy characteristics of products in Classes 2, 3, and 4 across such widely diverse products, the Department has distorted the energy use and savings potential. The Department has created a series of 10 classes of products. Class 1 is appropriate to Inductive Charged product. However, Classes 2, 3, and 4 represent an enormous range of products within each class. The Department has averaged the usage time, energy usage, average cost, payback, Life Cycle Cost, and energy savings across products within these classes, despite the fact that the products in each of these classes are enormously different. To illustrate our point, the Department estimates that 0.1 hours of the day Class 3 and 4 spend in “off mode.” However, MADB chargers *do not spend any time* in “off mode.” The Department needs to find a better way to approximate these elements so that they do not show only the average in the Final Technical Support Document. We would be pleased to work with the Department or its consultants to develop a more accurate method of depicting the energy in each group.

X. Scaling

The Department has promoted the idea of scaling the UEC by the Eb. The proposal to provide for scaling of the standard levels for products that may differ from the representative unit is a

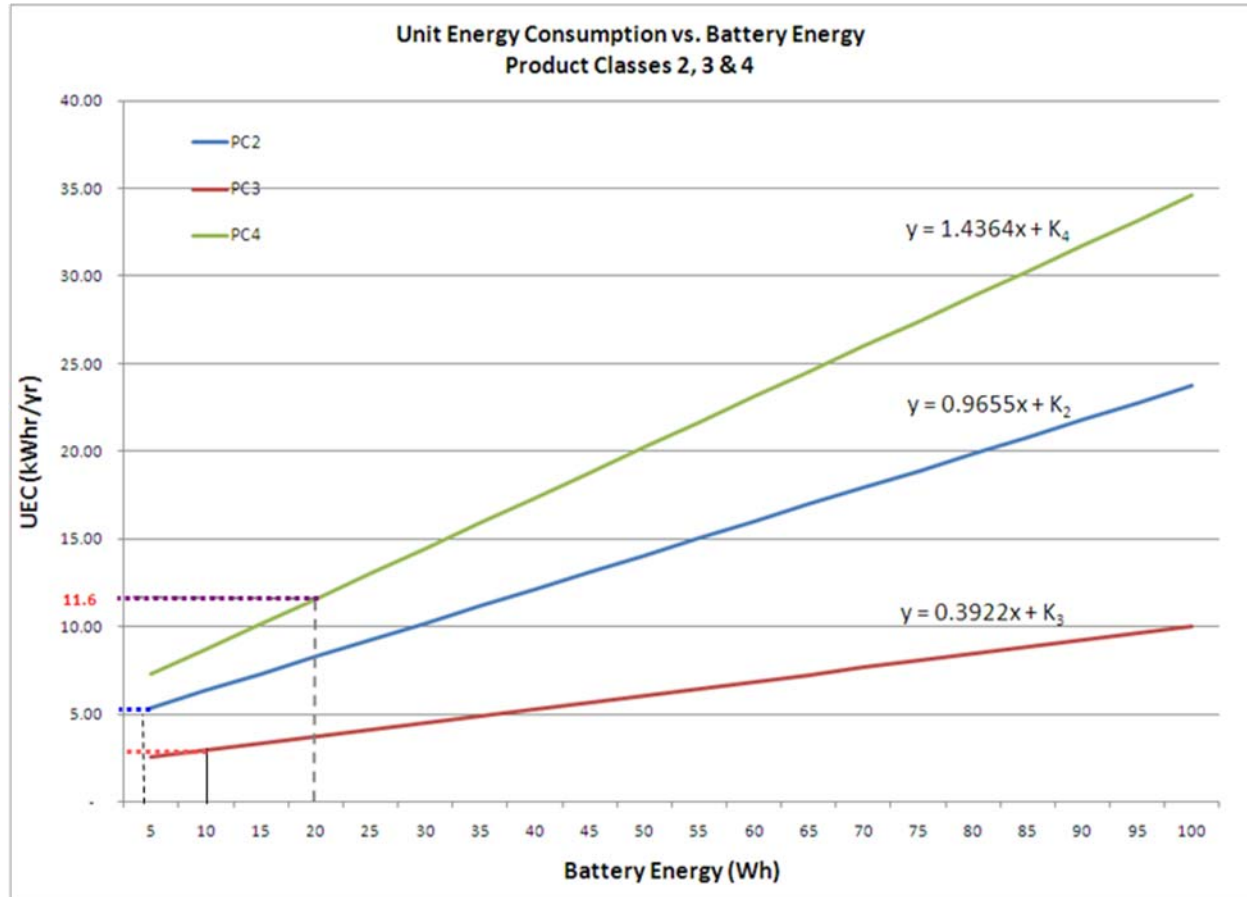
good approach. It allows the CSL, which takes into account the broad classification and the usage factors associated with it, the ability to adapt more appropriately to different cases based upon some parameter of the actual product. The analysis that was performed by conducting regression analysis on multiple units evidences not only provides correlation but also significance, at least through some range of the data. We would however, wish to suggest a few improvements to the method and some ideas for additional analysis:

AHAM suggests that:

1. The data seems to deviate substantially from the proposed scaling line at the lower battery energy levels. This is probably due to the fact that low voltage (which are probably often low energy) BCSs have their losses dominated by fixed losses that are a function of other factors. Our proposal would be to amend the line by having the CSL stay at a constant value below a certain point, most likely the representative unit point. This allows for more variation in units. Units in this section of the curve are relatively low powered and therefore the risk is small of forgoing substantial energy savings. Having an overly restrictive requirement for low powered units, by contrast, burdens the consumer with a price increase with very little corresponding energy savings.
2. The Department may wish to consider other factors, such as battery voltage, to determine if these provide a better correlation than battery energy in some classes. See attached, Figure 1.

Figure 1. An example of alternate scaling method.

Proposed – see dashed lines



XI. Manufacturer's Impact Analysis

AHAM recognizes that the Department will be conducting a full Government Regulatory Impact Model (GRIM) analysis and will be interviewing manufacturers for this. However, we would suggest that the Department and its contractors need to ask questions related to the impact on additional engineering, internal and external testing, and non-recurring capital improvements that are part of any significant change to the design. The most recent interviews do not touch on these costs. These costs can be significant, especially to Small and Medium Sized Enterprises as well as to larger companies. Any change to a battery charger energy efficiency that results in product changes will need to be sent to outside 3rd party testing laboratories for energy efficiency testing. The costs of these tests must be factored into the overall cost of change to ANY CSL involving product design. In addition, as these products are safety certified by outside 3rd party testing laboratories, additional evaluation must be conducted. The cost of safety certification must be included. Additionally, some of the proposed changes will result in changes to the outside housing of some wall-adaptors and battery chargers. This will result in changes to plastic injection molds that cost tens of thousands of dollars each. It could also influence the size of external packaging of the product. All of these costs must be included in the questionnaires from the Department in the Manufacturer's Impact Analysis and the GRIM analysis.

XII. Cumulative Regulatory Burden

The Department has asked questions about Cumulative Regulatory Burden. We would mention two items:

- A. If the Department continues on the path to regulating these products as both EPS and BCS then there is obviously an issue of cumulative regulatory burden. The regulations are different and manufacturers could easily end up in a system when the standards for EPS change at different time intervals than the regulations for BCS, putting manufacturers in jeopardy. This will result in double the energy testing burden.
- B. In addition, under CSL levels 2 and 3, much of the industry would be encouraged to change the battery cell chemistry from nickel-based cell chemistries (which offer great value and utility benefits to consumers) to newer lithium-based cell chemistry. Currently the U.S. Department of Transportation is considering regulations about the packaging and transportation of lithium ion cells in both the end-products and in the cell configurations. This regulation, to which AHAM has responded, could increase costs significantly on all users of lithium-based cell chemistries. Such additional costs need to be considered when suggesting CSL's significantly above the baseline.

XIII. Specific Issues On Which DOE Seeks Comment

The Department of Energy asked for comments and reactions to a series of questions at the Technical Support Document Workshop. AHAM's responses to those issues are below, identified by number according to the system used in the PowerPoint slides at the workshop.

Issue 1. Identifying Charge Control in Wall Adaptors

AHAM: We believe the question is not asked correctly. The issue is not how to identify charge control in wall adaptors but rather how to identify MADB Battery Chargers. We do not believe it is difficult to identify a product that is primarily motor operated or a battery charger for a product with a detachable battery pack.

Issue 14. Market Data

AHAM does not have market data on estimates of BC and EPS shipments or lifetimes.

Issue 18. Use in the Commercial Sector

AHAM does not have products in the commercial sector and cannot supply such data.

Issue 3. Product Classes for Battery Chargers

AHAM does not have an issue with grouping products into a series of 10 product classes. However, for purposes of estimating LCCA, energy use, energy savings, we believe the Department should find a way to conduct estimates without averaging such diverse products as they have currently done in the TSD. While we are not suggesting that the Department create additional classes for purposes of the standards, we believe the Department should conduct LCCA on sub-classes within in order to establish Candidate Standards Levels that do not produce negative LCCA for any of the sub-classes.

Issue 2. Technology Options for BCs and EPSs

AHAM does not have additional information on technology options. However, we suggest that DOE consider that some of the technology options that the Department has suggested may be limited by Intellectual Property considerations. We suggest DOE and its contractors conduct a search to make sure that some of the electronics options that have been suggested are open to use by all companies.

Slide 86. Issue Box “Additional Item” EPS Representative Units and CSLs

AHAM suggests that the Department consider whether the CSLs also apply to units that are less than 2.5W. There are several 2.4 and 1.2W units using 1 sub-C or small AA size rechargeable batteries. The CSL for this Class does not apply to these smaller products.

Slide 88. Issue Box “Additional Item” Aggregation Methodology

AHAM does not have a comment on the three-dimensional equation used to aggregate the data.

Issue Box Item 13 “Cost Estimates for Product Classes not Fully Analyzed”

The Department showed a significant difference between the manufacturers cost data and the reverse engineering situation. However, we do believe that the questions for manufacturers should also include questions about testing costs and non-recurring capital expenditures. There is no incentive for manufacturers to not give all necessary information to the Department. We believe based on what was presented that the Department should use the manufacturer’s data.

Issue 9. Efficiency Metrics for Multiple Voltage EPS

AHAM does not have comments on multiple voltage EPS. None of the products within AHAM’s scope utilize multiple voltage EPS.

Issue 11. Baseline Candidate Standard Level of Efficiency for Medical and MADB EPS

AHAM has explained on numerous occasions that MADB do not use EPS. The wall-adaptor is part of a Battery Charger System and should be evaluated **ONLY** by the battery charger test procedure and regulated by the battery charger standard.

Additional Item. “Scaling CSLs within BC Product Classes

AHAM does not have an objection to scaling the CSLs provided that the data used for the CSL was developed using the appropriate LCCA and energy data, rather than the averaging techniques in the Preliminary TSD. As AHAM has previously stated, the technique used by DOE and its contractors to average all aspects of the impact of standards across a very wide range of products in BCS Class 2, 3 and 4 are wrong. This represents products which have retail prices from \$20 to \$2,000. The impact to consumers on a \$2,000 laptop computer of a price increase is far different than the impact to a \$20 cordless rechargeable vacuum or personal care appliance. The shipment weighted averaging used in this technique defaults to products such as

laptop computers, MP3 players, notebook and netbook computers and not to the smaller items. This makes the LCCA look as if it has little or no impact. **This is WRONG.** DOE needs to do a better job on the averaging techniques within product classes to take into account the impact on all the sub-classes and not just an arbitrary “average” product.

Please see our comments on Pages 8, 9, and 10.

Issue 20. Estimated Usage Profiles and EPS Loading Points

AHAM has continuously stated for over 5 years that this approach is absolutely wrong for a wall-adaptor for a battery charger. To arbitrarily load a wall-adaptor for a battery charger at 25, 50, 75, and 100% of its rated load is, and always has been wrong. Battery Chargers are operated at one and only one current load. To load them at 4 arbitrary loading points is totally inaccurate. This might be appropriate for an EPS but it will never be appropriate for the wall-adaptor of a battery charger.

Issue 17. Sensitivity Analysis Methodology and Results

AHAM has no comment on the sensitivity analysis other than to point out again that the averaging technique within classes does not properly approach the correct Life Cycle Cost or savings potentials for a class when there are such widely diverse products within classes. Even using a Monte Carlo methodology does not accurately predict the impact on all products or manufacturers within classes that are improperly maintained.

Issue 19. Substitutability

AHAM believes that, quite the opposite, it is likely that manufacturers of some smaller battery chargers will explore the use of primary cell battery technologies in order to avoid the enormous price increases necessary to meet some of the CSLs.

Issue 22. Shipment Trends

AHAM believes that the significant price increases necessary to meet the requirements of some CSLs may have a depressing effect on the shipments of some battery operated products, particularly at the lower price points and smaller product segments. Many consumers purchase hair clippers in times of economic recession to help defray the cost of haircuts for children. In addition, a small cordless vacuum cleaner becomes an adjunct appliance to the standard household 120V vacuum cleaner. The use of a cordless rechargeable electric shaver is often a choice versus wet shaving. Any rapid rise in the MSP of these products could cause families to decide to avoid the cost of the appliance and utilize other means to meet the needs of their

family. We request that DOE review its shipment forecasts for smaller products to show that increases in MSP levels will have a potential of reducing shipments.

Issue 23. Base Case Efficiency Distribution and Efficiency Forecast

AHAM agrees that without the standards shown in the appliance categories, efficiencies may not increase. However, it appears that the European Union will begin a series of battery charger efficiency standards in 2011 and these could have an effect on some non-wall-adaptor battery chargers.

Issue 25. Impact on Manufacturers

AHAM believes that the Department needs to also include more information on the impact of smaller manufacturers for engineering time, capital improvements necessary to increase the size of the footprint of some wall-adaptors to accommodate additional circuitry and both the ENERGY and safety testing and approvals prior to the shipment of products. Since the DOE will now require 3rd party testing, this additional time must be factored into the time to market.

Issue 26. Cumulative Regulatory Burden

AHAM believes that the Department must include the cumulative regulatory burden of meeting the California Energy Commission Tier 2 EPS standards, which are wrongly applied to the wall-adaptors of battery chargers. In addition, the European Union will soon begin a series of regulations on battery chargers that may have an effect on some products.

DOE should also examine the cumulative regulatory burden that they are placing on manufacturers of MADB Battery Chargers because of the need to regulate and test these products as both an EPS and a BCS.

Issue 24. Externalities

AHAM believes that while the Department should give consideration to the externalities, the most important items are a true and accurate appraisal of the LCCA cost to the consumer and payback to the consumer over the lifespan of many of these products as well as the impact on business to meet these new regulations. It will serve no purpose to cause consumers to reject such products due to rapid increases in MSP that could narrow competition.

Issue 27. Monetizing Emissions

AHAM has no comment on this issue.

Additional Item. Alternative: Combined Trend Line Equation

The Department produced a series of newer slides that were handed out at the TSD Workshop having to do with an alternative approach. This approach would use the average usage pattern in a Class of product to produce a combined trend line equation rather than the energy usage equation in slides 139-140. AHAM believes that there is merit in considering such an approach. As was shown by Alternative Slide #3, there is a cluster of products below about 20 Watt hours and below about 100 W in 24 hour energy and below 50 Watt hours and 5 W in Maintenance Mode. While the line slope may have been chosen as an arithmetic mean of the distribution of products for active, maintenance, and no-battery mode, we believe the Department needs to revisit this approach, particularly for smaller Watt hour and Wattage products. Alternative Slide #7 shows the CSLs lines to cease at below 5Whr, but there are a number of small appliances in this realm.

See AHAM comments above on Page 8, 9 and 10 and Figure 1.

Thank you for the opportunity to comment on the Preliminary Technical Support Document.

Sincerely,

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

Wayne E. Morris
Vice President, Division Services