



Philips Electronics North America Corporation

November 4, 2010

California Energy Commission
Docket Office, MS-4
Re: Docket No. 09-AAER-2
1516 Ninth Street, Mail Station 4
Sacramento, California 95814-5504

RE: Docket No. 09-AAER-2

Dear Commissioners:

Philips Electronics sells personal care, consumer electronic, emergency lighting and medical products that use battery chargers. We have provided comments for a number of CEC rulemakings regarding battery chargers and external power supplies. Philips is a member of AHAM, CEA, NEMA, Advamed and the Wireless Power Consortium and we concur in their comments. We want to emphasize a few comments, which are attached, that are of particular importance to Philips Electronics.

In addition to substantive problems with the CASE report, we also identify the failure of the proposal to consider the time to implement any changes because of the time to make design change and comply with existing regulatory requirements. We also share the concern expressed by AHAM and others about the regulatory process for this proposal.

Thank you for consideration of our comments. Please let me know if you have any questions concerning them.

Sincerely,

Ric Erdheim

Ric Erdheim

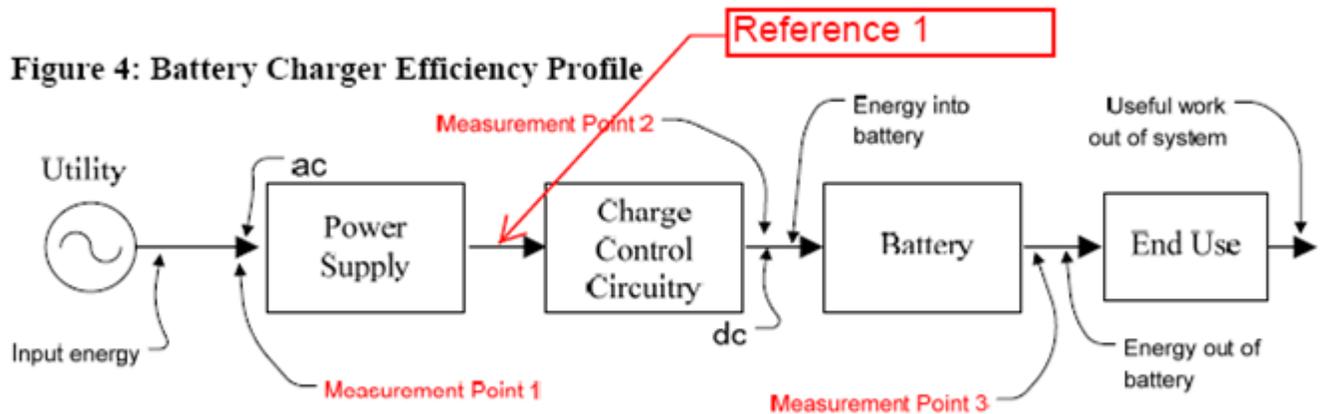
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Emergency Lighting

We find it impossible to evaluate the CASE study concerning Exit Signs/Emergency Lighting due to the regulatory performance requirements and range of products not taken into consideration.

During the CEC webinar, in response to a question I asked we learned that the proposal for battery charger efficiencies has been drafted to include EXIT signs as well as Emergency Lighting Unit Equipment. In reviewing the CASE report with this intent, it is obvious that PSE&G and its consultant do not understand the capacity variations of emergency lighting unit equipment available on the market. Emergency Lighting Unit Equipment is rated based on its ability to sustain a total connected load for a period not less than 90-minutes. The more capacity a piece of equipment is rated for the more battery mass is required to support the connected load. Having said this, and understanding that batteries are charged at a rate determined by the battery manufacturer's in order to achieve maximum life and readiness, the higher the capacity rating of the equipment the more power will be consumed in the charging process. This lack of understanding should illustrate the fact that a categorical requirement for all such equipment as proposed is non-achievable.

With respect to exit signs, if table 7 and figure 4 are supposed to represent energy use of exit signs they fail to take into account that the power supply feeds not only the charging circuitry but also the LED light bar as shown in the chart below.



All code standards require that exit signs are to be illuminated at all times. So a failure to consider this energy use is a significant flaw in the analysis

The lack of understanding of emergency lighting and exit signs was further demonstrated at the webinar when in response to a question I raised about whether the proposal considered the applicable UL standards requirements the PSE&G consultant said yes because the standard addressed brightness and not battery power. UL standard 924, however, dictates the discharge testing requirements for the emergency lighting equipment in order to substantially provide egress lighting for building occupants, something ignored in the CASE report and in the response from PSE&G consultant. This standard includes all products that have the ability to

operate in the emergency mode whether be it by integral battery or by other means such as having the ability to be connected to a remote source of power such as a generator.

For equipment with integral batteries, UL 924 requires, among other things, a performance test called “Battery Discharge Test”. This test requires several charge/discharge cycles as it relates to the rated ‘recharge’ time and maximum load rating associated with the equipment. One portion of this test only makes an allowance for a recharge period of 24-hours followed by a discharge test that is no less than 60-minutes in duration. To alter the charging characteristics for this equipment for the sake of energy is to jeopardize the embedded performance requirements for Life Safety and egress as outlined under the battery discharge test program.

Additionally, as the manufacturers are held to meeting the UL 924 requirements, the specifiers and facility owners are bound by performance requirements found in the International Building Code (IBC), National Fire Protection Association Life Safety Code (NFPA 101), and National Fire Protection Association National Electrical Code (NFPA 70) in order to determine how many units are required for a given facility and at what level they are to perform. Obviously, the needs of the facility are the driving factor as to what type of equipment is employed and power demand fluctuates with the product capabilities. This is not a cookie-cutter type of product like an MP3 player or a toothbrush.

Finally, the CASE study itself makes no reference to the performance requirements manufacturers are held to with respect to Life Safety Equipment.

It also appears that the data on the use of battery powered exit signs in California is inaccurate. California is a large consumer of generators and large emergency lighting inverter systems that do not use units with integral battery power. We believe that a large number of exit signs in California are not battery-powered units. So a large portion of emergency signs in California are not relevant to a study of energy use by battery powered emergency signs. This means that the CASE study would have significantly overestimated potential energy savings.

We also note that the study does not reference the existing CEC appliance efficiency standard database for exit signs. Philips participates in this program as do a small number of other manufacturers. Is this an oversight on the part of the committee or is this procedure going to supersede the existing database? The study does, however, reference the Energy Star program for exit signs. What it fails to mention, however, is that Energy Star suspended this program in 2008 because most if not all LED exit signs met the Energy Star requirements for energy efficiency.

Finally we note that a 2012 effective date for exit signs is not achievable. Exit signs are life saving equipment that is not just bought off the shelf. Products must not only be designed but must be tested to assure that it will provide the life saving function of the product. The design time, quality and regulatory testing alone for this effort would take about one year. This time takes into consideration resource and procurement cycles which are not transparent to the CASE report authors. Beyond preliminary design and testing, the regulatory approval process averages about another five months. Once regulatory approval is completed, material procurement to support manufacturing can absorb another four to five months. The number of

products associated and implicated in this study compounds the timeline even further and makes a minimum two-year period for the effective date of any regulatory standard.

We are extremely disappointed that the study apparently was developed without talking to anyone in the industry who would have pointed out all of the study's flaws. The CEC would be making a huge mistake if it moved forward with a regulation that could affect life saving equipment or producing requirements in direct conflict with the required performance criteria established in UL 924.

Inductive Charge

We believe that the proposed standard for inductively charged products in a wet environment is achievable but not for all products in the proposed time frame. The EU has horizontal requirements going into effect in 2013 that regulate standby and off mode energy use. We will be instituting design changes to achieve these standards in 2013. We make essentially the same basic product (while dealing with different electrical systems) worldwide so these products will be available in California and the US in 2013. These new products will comply with the proposed California standard for inductive products in a wet environment. We believe that a two year compliance time frame is necessary for such inductive products to harmonize with European requirements and because it takes up to 2 years to implement this type of change and have it be tested by the safety and energy testing laboratories.

We do note, however, that the CASE report likely significantly overstates energy savings from the proposal for two reasons. First, some people buy a two pack which contains two handles and two brushes but only keep one handle plugged in. In addition, some users unplug the charger when it is not charging the handle. We estimate the number of tooth brushes unplugged to be about 20%.

Medical Products

Philips makes numerous consumer medical products containing battery chargers including automatic external defibrillators, portable oxygen concentrators, medical nebulizers, and portable medical diagnostic equipment. These medical products are a special category because there are significant differences between medical products and other products using battery chargers. The risks of product failure are vastly different. Product failure for a medical product could result in significant injury or death in contrast to the risk of a shaver or MP3 player failing. Medical products have a special regulatory process that adds testing requirements, cost and time to the approval process. Consumers use many medical products for long periods of time and they are expected to last longer than most other consumer products.

This is not the first time the CEC has addressed the issue of regulating medical devices. In 2007 the CEC adopted an efficiency standard for external power supplies but provided the following exemption:

“Power supplies, which are single voltage external AC to DC and AC to AC power supplies included with other retail products, and single voltage external AC to DC or AC to AC power supplies sold separately, excluding power supplies that are classified as devices for

human use under the Federal Food, Drug, and Cosmetic Act and require U.S. Food and Drug Administration listing and approval as a medical device.”

We recommend that the CEC follow this precedent and exempt products that are regulated by the US Food and Drug Administration to ensure that the CEC does not inadvertently act in a way that could adversely affect public health.

We are particularly concerned about the proposed time frame to implement such regulations. This time frame does not make sense in the case of medical products for the following reasons:

- The life cycle of many medical products, such as diagnostic imaging products, is in the order of 6-10 years.
- The development life cycle is in the 2-4 year (or greater) timeframe.
- Medical compliant battery chargers are a very low percentage of the overall number of battery chargers in use. Due to the more stringent electrical design requirements (mainly for leakage currents), medical products cannot use off-the-shelf consumer grade battery chargers.
- The regulatory approval cycle for medical products is longer than for consumer grade products. Even though the electrical and mechanical “safety” testing conducted by third party labs is about the same in time, medical products have an added requirement for meeting the FDA regulations which can increase the delay in time to market by a few weeks to many months.

We would note that in the EU Directive on the Restriction of Hazardous Substances the EU has proposed to provide a minimum of six years for medical device manufacturers to come into compliance reflecting product design cycles and regulatory approval processes.

An effective date of one year after regulation adoption is thoroughly unworkable and not consistent with other regulatory actions including those by the CEC.

Wireless Power

Wireless power is a new technology for which technology standards are being developed to provide for a common platform. This proposed standard addresses standby power. We understand that because this is a new technology the study does not address. We are concerned, however, that the CEC might inadvertently take regulatory action that could have the unintended effect of stifling this new technology. Complicating the issue is that we do not believe that a wireless charger is either an external power supply or a battery charger but we understand that others might be some confusion on this issue.

Usage Patterns

In every comment Philips has provided to the CEC on any aspect of external power supplies or battery chargers we have emphasized that the CEC needs to consider that many products are infrequently charged and as a result have little power for energy savings resulting in an unfavorable payback period. The Department of Energy has developed proposed usage patterns for close to sixty products with battery chargers. According to DOE data eighteen of

these products are plugged into the mains on average 1 hour or less a day. Another eight are plugged into the mains on average less than half a day and only nineteen are plugged in all the time.

The CASE study, however, would propose to regulate infrequently charged products to the same extent as continuously charged products. This makes no sense. ECOS staff says that data does not exist to distinguish these products. In other words, its proposed approach is to have the CEC stick its head in the sand and ignore common sense and existing DOE data.

Philips continues to urge the CEC to treat infrequently charged products in a separate class or classes to reflect the lack of energy savings potential for these products and the resulting long payback to increase the efficiency of these products.

Need for CEC to act

Finally we note two arguments that were raised in the October workshop for CEC action on battery chargers. First, some argued that the CEC had to adopt regulations to participate in the DOE process. Since, however, the DOE process is open to all participants and California utility staff has actively participated in the process we suggest that the CEC continue to work with the DoE process instead of moving to its own duplicative and potentially conflicting regulations.

Second the CASE study says that without any CEC action there will be no improvement in battery charger efficiency. But with the implementation of the EU horizontal standards on standby and off mode energy use and the adoption of DOE standards for battery chargers there will be mandated improvement in battery charger efficiency. To this point Philips currently has a significant effort underway to improve battery charger efficiency as demonstrated by our Energy Star registration of eight models of battery chargers in shavers.

Both reasons suggested as the need for the CEC to act are inaccurate.