



November 21, 2011

California Energy Commission
Docket No. 11-AAER-2
Docket Unit
1516 Ninth Street, Mail Station 4
Sacramento, CA 95814-5504

RE: Comments of the Information Technology Industry Council to the CEC Regarding Its Proposed Regulations for Battery Charger Systems [Docket Number 11-AAER-2]

ITI welcomes the opportunity to provide additional comments on the amendments to the appliance efficiency regulations with regards to devices containing a battery charger. We also wish to clarify certain points made in ITI's previous submissions.

ITI and its member companies have highlighted a number of challenges faced by multi-function devices, especially computing devices with very small battery supplies. Our membership also has recognized the need to accommodate these multi-function devices until we can develop and prove a testing method to isolate these functions from battery functions. We've highlighted technical considerations that were not addressed by original studies for the efficacy of the regulation and offered adjustments to the limits that are still very challenging but feasible.

Challenges identified in ITI's October 24th presentation and previous inputs remain key considerations :

- Off Power limits with a battery should comprehend impact of the integration of battery and AC circuitry.
- Energy consumption of non-battery functions in the off mode
- Manufacturability limits, due to both feasibility and cost (especially as regards devices designed to be supported by USB connections).

To accommodate these considerations, ITI recommended the following changes:

- Maintenance and 24 Hour limit adjustment
 - Maintenance and no-battery mode power to 1.2W for devices with $E_b \leq 100\text{Whrs}$
 - 24hour maintenance limit to $20 + 1.6 E_b$ for devices with $E_b \leq 50\text{Whrs}$

Alternatively, and as indicated in subsequent discussions with the Commission, we could support a change that scales to the battery capacity (Eb). The alternate recommendation that would scale with Eb and accommodate these multi-purpose computing devices is as follows:

- Maintenance and 24Hour limit adjustment
 - Maintenance and no-battery mode power to $1W + 0.0025*Eb$ for devices with $Eb \leq 100Whrs$
 - Maintenance and no-battery mode power to $1W + 0.003*Eb$ for devices with $Eb \leq 50Whrs$
 - 24hour maintenance limit to $12 + 1.75*Eb$ for devices with $Eb \leq 50Whrs$

These limits would represent an over 50% reduction in power for the population of devices considered in the 2009 ENERGY STAR data. This is especially challenging when one considers the manufacturability requirements noted in ITI's October 19th response (Fig. 3).

Test Method.

ITI has had a constructive dialogue with the CEC staff on the need for an alternative testing method that would entail isolating the battery charging circuit and accommodate multifunction IT equipment where battery functions merely support the primary operations of the systems. In this regard, we want to emphasize that the current testing method assumes that a battery charging system will function while the product is in an "Off" or "Standby" state. ITI companies, however, manufacture some products that will only activate the battery charger in the "On" state where there is significant power being consumed by functions other than the battery charger. The current test method cannot measure the efficiency of the battery charger function embedded in systems such as these.

Labeling.

ITI would like to re-emphasize that physical labeling on the product is not needed and would be a costly addition to the program. Since the product must be registered for compliance, simple documentation accompanying the system would be all that is necessary to identify compliant devices. In addition, if there are any changes to the program as with the advent of any Federal program, the documentation could be adjusted with minimal impact to the cost and delivery of these products.

Other Issues.

There were three issues on the ITI presentation indicated by the CEC staff and ECOVA at the October 24th Hearing. Our responses are as follows:

Issue: The population data cited by the industry is based on 2008 systems.

Response: Yes. This is, unfortunately, the latest publically available and comprehensive assessment on a narrow group of notebook systems. ITI did NOT use this data to define the proposed limits, but rather, to project the difficulty in achieving what the CEC draft specifications indicate. As noted in the ITI comments, the CEC draft specifications imply a request to migrate the entire population of devices, regardless of a devices' increased functionality or application, to 25% better than the top 25% of those 2008 systems.

Also please note that ITI highlighted to Commission staff that a full market assessment of this product category was not feasible earlier this year. Commission staff recognized that there were very limited samples to adequately investigate the issues highlighted by the industry. As a result, the industry has utilized design and manufacturing knowledge, internationally recognized engineering practices, and sample data to demonstrate feasible options for these products. The Energy Star data provided demonstrates the variability that exists even for a narrow portion of the market.

Issue: ECOVA indicated that the CEC battery charger low power mode requirements currently proposed in the 45 day language are actually less stringent than the European Union's Lot 6 requirements proposed to go in on the same date.

Response: ITI members have described in detail the rationale as to why EU's Lot 6 is not more stringent than the battery charger specification. The CEC's proposed battery charging specification assumes that all non-battery functions can be turned off, which is not the case once the battery is present. That is one of the considerations why the EU's Lot 6 regulation both relies on the explicit removal of the battery and scope limited to AC powered devices.

ITI's original proposal was based on EU's Lot 6 specifications. Those proposals requested much more power allocated to the non-battery functions. To be consistent with EU Lot 6 targets, CEC battery charger limits would require the following (based on ITI's presentation dated June 2011, without subtracting non-battery functions):

Maintenance and off limit	$2.0W = (1.3W + \text{Wake_function})$
24 hour limit	$28.8 + 1.6 * E_b$

Please note that once battery and system considerations are taken into account, ITI's current proposals and alternative are still more challenging than EU Lot 6. Ignoring the non-battery functions as implied with the current CEC proposed limits, would negatively impact consumer costs and stall efficiency innovations, especially on small battery capacity multifunction devices ($E_b \leq 50\text{Whrs}$)

Please also note that the industry (ITI, Digital Europe, ECMA and other industry associations) had worked extensively with EU Energy Commission staff and stakeholders to develop test procedures to isolate the standby and off functions. These procedures ensured independence to the battery functions. In fact the industry developed implementation guidelines which have been endorsed by the EU as their advisory

(http://ec.europa.eu/energy/efficiency/ecodesign/doc/legislation/guidelines_for_smes_1275_2008_okt_09.pdf).

Issue: The test procedures only define the accuracy of the test equipment. Why would manufacturers need to guardband their testing more than that?

Response: The test guardbands used by manufacturers need to ensure that all devices would meet the limit, especially if a user or 3rd party inspects or samples these systems given the test procedures identified. Though neither the test procedures nor limits address the measurement error that occurs when dynamic test measurements are conducted using the accuracy level defined, manufacturers need to incorporate that measurement error into their manufacturing test guardbands. This is a standard practice and necessary to safeguard against any claims that products do not meet the specifications listed.

ITI also notes our support for the comments by TechAmerica as concerns both USB-Based Chargers and Inductive Charging.

Finally, we note that the US ICT industry has been and will continue to achieve massive innovation, to include energy efficiency innovation. It will be vital to ensure that this proposed rule, and any other rules promulgated by the CEC also impacting our industry, do not have the unintended consequence of hindering the introduction of innovations that would advantage California consumers.

We encourage the commission, staff and key stakeholders to take these considerations into account in determining the final ruling. We also encourage any questions or dialog required to clarify any of the positions taken by ITI.

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