November 4, 2010

DOCKET
09-AAER-2
DATE NOV 04 2010
RECD. NOV 04 2010

Delivered Via Email:
docket@energy.state.ca.us

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

Re: Docket 09-AAER-2, 2010 Rulemaking Proceeding Phase II on Appliance Efficiency Regulations

Dear Messrs. Leaon and Singh:

PRBA – The Rechargeable Battery Association is pleased to submit the following comments on the report entitled *Analysis of Standards Options for Battery Charger Systems* prepared by Ecos Consulting. PRBA's members include many of the world's leading manufacturers of portable and large format rechargeable batteries and portable electronic equipment and would be directly affected by the proposed standard.

Our comments below specifically address the Tier 1 and Tier 2 Large Battery Charger Standard. Our concerns regarding Small Battery Chargers are addressed in the letter signed by the following organizations and filed today with CEC: Association of Home Appliance Manufacturers; California Manufacturers and Technology; Association, California Retailers Association; Consumer Electronics Association; Consumer Electronics Retailers Coalition; CTIA - The Wireless Association; Power Tool Institute; PRBA – The Rechargeable Battery Association; TechAmerica; and Toy Industry Association.

Ecos Consulting has failed to consider the impact on large format nickel metal hydride and lithium ion battery manufacturers that are designing batteries for use in hybrid electric vehicles, electric vehicles and stationary applications. Our comments specific to the Tier 1 and Tier 2 Large Battery Charger Standard listed on page 55 of the Ecos report are provided below. (The bold text are excerpts from page 55 of the report.)

PRBA - The Rechargeable Battery Association
1776 K Street, NW
Washington, DC 20006
www.prba.org – prbatt@gmail.com

Tier 1 to Take Effect in 2012

For *large battery charger systems* the charge return factor, C_{RF}, shall be $1.05 \leq C_{RF} \leq 1.15$ for 80% and 100% depth of discharge.

PRBA Comments: This will cause all lithium ion batteries to fail, and risks doing so with flames and smoke. The language of the standard is appropriate only to chargers of lead-acid batteries. There is no analysis or discussion of other battery technologies, such as the nickel metal hydride and lithium ion that are used in hybrid electric vehicles (HEV) and electric vehicles (EV). The proposed standard should be limited to the lead-acid fork truck battery chargers that appear to be the sole subject of the analysis.

For 40% depth of discharge the charge return factor shall be $1.05 \leq C_{RF} \leq 1.20$.

See comments above.

The average maintenance power for *large battery charger systems* shall not exceed 75 watts.

PRBA Comments: There is no allowance for battery size, therefore this requirement is nonsensical. Several of our members are working to develop batteries with capacities in the MWh range. The battery charger system could thus be the size of a substation. Requiring maintenance power of 75 watts or less is preposterous for such a large system.

The average no battery power for *large battery charger systems* shall not exceed 20 watts.

PRBA Comments: Likewise, the equipment falling under the 20 watt proposed limit could be an industrial control system covering several acres and is completely nonsensical.

The power conversion efficiency for *large battery charger systems* shall be greater than or equal to 84%.

PRBA Comments: Large battery chargers may include significant voltage transformation as well. For instance, large batteries with voltages at 1 kV or less may be designed with chargers fed directly from 250 kVac. The inefficiencies involved in the transformation to low voltage would be included under the proposed language. Since such large batteries will be installed primarily for purposes of energy efficiency at the level of the utility system, applying charger efficiencies will be a sub-optimization since the performance measures are not taken at the overall system level. The proposed standard should be limited to the lead-acid fork truck battery chargers that appear to be the sole subject of the analysis.

The power factor for *large battery charger systems* shall be greater than or equal to 0.85.

PRBA Comments: Large battery systems that are purchased and installed by utility systems should not be required to meet this standard since the power factor penalty is paid by the utility. Only the utility will be in position to judge a tradeoff between power factor and other performance metrics such as energy efficiency, charge rate, or system reliability.

Tier 2 to Supersede Tier 1 in 2013

For *large battery charger systems* the charge return factor, C_{RF}, shall be $1.05 \leq C_{RF} \leq 1.10$ for 80% and 100% depth of discharge.

See comments above.

For 40% depth of discharge the charge return factor shall be$1.05 \leq C_{RF} \leq 1.15$.

See comments above

The average maintenance power for *large battery charger systems* shall not exceed 10 watts.

See comments above.

The average no battery power for *large battery charger systems* shall not exceed 10 watts.

See comments above.

The power conversion efficiency for *large battery charger systems* shall be greater than or equal to 89%.

See comments above.

The power factor for *large battery charger systems* shall be greater than or equal to 0.95.

See comments above.

* * *

Thank you for considering our comments. Please contact me if you have any questions regarding this issue. I can be reached at 202.719.4109 or gkerchner@wileyrein.com.

Thank you.

Sincerely,

George A. Kerchner

George A. Kerchner
Executive Director