



**NRDC Comments on CEC Battery Chargers Proceeding  
2010 Rulemaking Proceeding Phase II on Appliance Efficiency  
Regulations: Docket Number 09-AAER-2**

May 31, 2011

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<b>DOCKET</b>	
<b>09-AAER-2</b>	
<b>DATE</b>	<b>MAY 31 2011</b>
<b>RECD.</b>	<b>MAY 31 2011</b>

On behalf of the Natural Resources Defense Council and our more than 250,000 members and online activists in California, we respectfully submit these comments on the Energy Commission's draft regulations for battery chargers posted on May 10, 2011.

NRDC strongly supports California Energy Commission's (CEC) Battery Charger Systems (BCS) proposal and encourages CEC to proceed without delay to lock in strong savings for Californians as well as to positively influence US Department of Energy (DOE) rulemaking.

CEC's proposed standard will save California the equivalent of the output of a 350 MW power plant, enough electricity to power all the households in a city the size of San Francisco. Each year of sales of products meeting the standard will save Californians \$300 million in reduced electricity costs over the lifetime of the products. The reinvestment of these savings will stimulate the California economy, creating jobs. Finally, the standard is very cost effective: for every dollar of incremental retail cost for the efficiency improvements, Californians will save 7 dollars in reduced electricity costs, an excellent return on investment by any standard.

For this to happen, California needs to enact the standard before DOE, in order to lock in savings until preemption, and more importantly to influence DOE to set a standard at the same level of stringency, so that Californians keep the same level of savings after pre-emption.

In support of CEC moving forward with a strong standard, NRDC offers comments on the following topics:

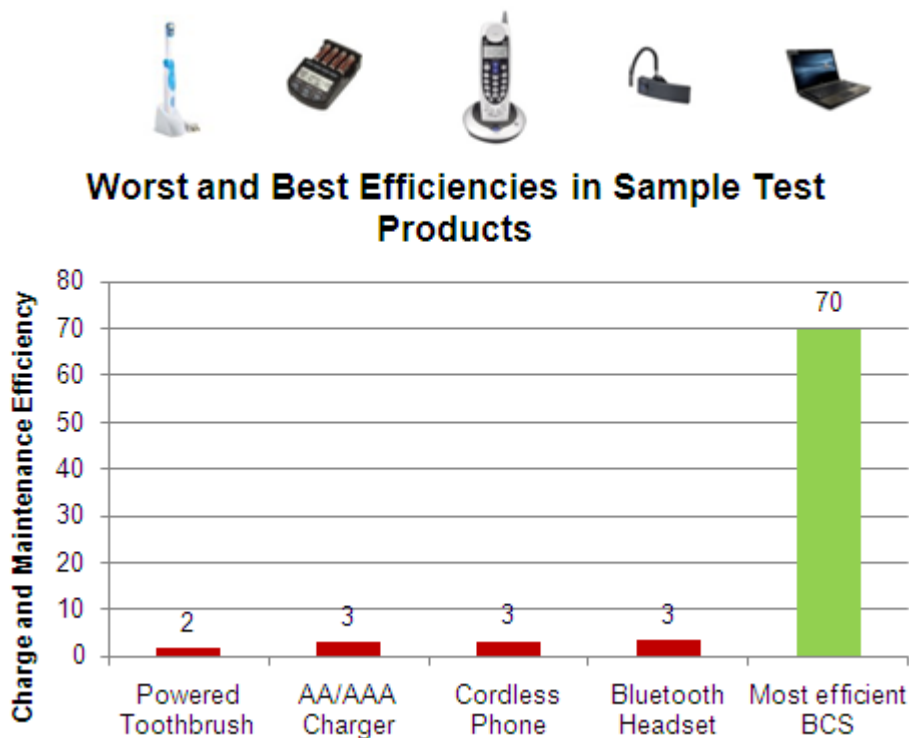
1. Many battery chargers currently in the market are very energy inefficient

2. California needs to set a strong standard before DOE
3. NRDC urges the Commission not to make unwarranted concessions that would unduly reduce cost-effective savings
4. Notebooks and other high tech products already have design goals that will allow them to meet the proposed CEC standard
5. The proposed efficiency mark is a key enabler for BCS market transformation.

## Discussion

### 1. Many battery chargers currently in the market are very energy inefficient

The Commission's test data shows that on average 63% of the energy used by products with battery chargers is wasted per the official testing procedure for BCS. The efficiency of the worst products is as low as 2%, meaning that 98% of electricity is wasted in the battery charger, providing no utility, but costing users money in electricity costs.



This massive waste of energy is unacceptable to NRDC and our members. Power generation is the largest source of toxic and global warming pollution in the US, and is responsible for serious health issues such as cancer and birth defects and for exposing Americans and the rest of the world to accelerated climate change.

Unfortunately there is no simple way for users to identify and purchase efficient BCS products. Setting a strong standard will ensure manufacturers include energy efficiency best-practices in their designs and compete to find the most cost-effective ways to meet the standard.

## **2. California needs to set a strong standard before DOE**

The federal BCS energy efficiency standard under development by DOE will preempt state standards when it is enacted. However the statute (42 USC 6295 Paragraph u) allows state standards enacted before DOE's final rule is issued to keep their standard in place until the federal standard takes effect. DOE's schedule is uncertain, as they have not yet published a Notice of Proposed Rulemaking (NOPR), and will need several months from that date until they can issue a final rule due to legal requirements. This gives California an opportunity to capture savings ahead of DOE for at least 12 months and likely 18 months or longer depending on when DOE will issue a final standard. For every month California's standard is in place before pre-emption, Californians will save an incremental \$25 million. NRDC therefore strongly encourages CEC to proceed with this rulemaking without delay.

After pre-emption, to ensure that Californians maintain the same level of savings, the federal standard needs to be of equivalent stringency as the pre-empted state standard. DOE's preliminary analysis identified 4 candidate standard levels (CSL), with CSL1 and CSL2 being the most likely levels for the future federal standard. CEC's proposed standard is very close to CSL2. DOE's analysis shows that CSL2 would yield 60% greater savings than CSL1.

The best way to ensure that Californians keep the 60% additional savings above CSL1 is for CEC to pave the way for DOE to set the federal standard at CSL2. If California leads by setting its own standard at CSL2, it is unlikely that DOE would set a weaker federal standard, given that cost-effectiveness and savings are comparable between California and federal level.

These California and federal BCS rulemakings may be the last opportunity to set standards for BCS as future incremental standards will hit an area of diminishing returns and may not be as cost-effective. It is therefore essential to get the standard right and maximize savings opportunities for California and the nation in the current rulemakings.

### **3. NRDC urges the Commission not to make unwarranted concessions that would unduly reduce cost-effective savings**

In response to stakeholder feedback, CEC's May 10 revised proposal includes 16 changes to scope, test procedure and standard, that address legitimate industry concerns. While NRDC supports addressing any remaining legitimate concerns, we caution the Commission against unwarranted concessions that would further reduce cost-effective savings.

During recent rulemakings on External Power Supplies and TVs, the Consumer Electronics Association (CEA) made dire predictions that these standards would be so difficult or costly to meet by manufacturers that they would result in empty shelves and cause some small and medium-size retailers to close. These predictions proved inaccurate, none of that happened.

California's EPS standard and efficiency mark were a resounding success: they were adopted by DOE and by many countries internationally, resulting in dramatic efficiency improvements in all electronics using external power adapters. The savings from the EPS standard were estimated to over \$1 billion in US and \$100 million in California (PIER).

Similarly, TV manufacturers were able to meet California's Tier 1 standard that came into effect in January 2011. The standard had no impact on product availability. In fact, almost all TVs sold today already meet the CEC's 2013 Tier 2 standard, 2 years early. These more efficient TVs cost LESS than they did in 2009 and have MORE features.

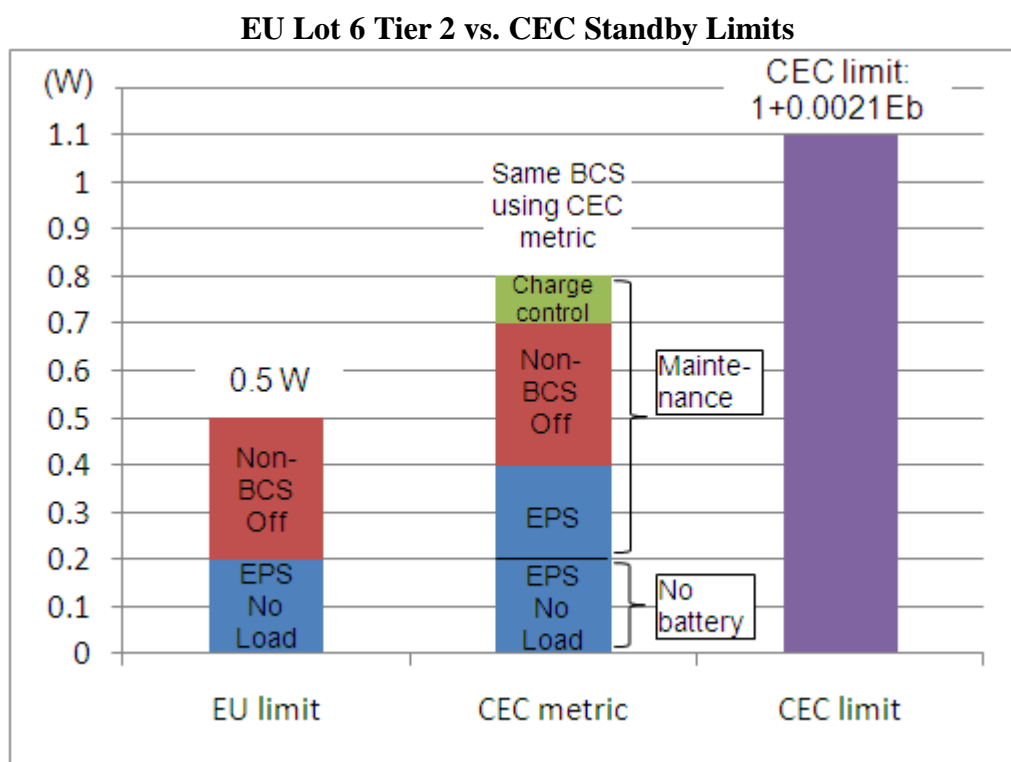
This historical record of overly conservative claims by some industry representatives should serve as a reminder that industry has a remarkable ability to meet standards faster and at a lower cost than it estimates.

Lastly it is important to note that some industry representatives are in strong support of the standard: the Power Sources Manufacturers Association (PSMA) wrote a letter of support on March 17, 2011, stating that "given today's significant energy and climate challenges, we are supportive of the California strategy to increase energy efficiency of battery chargers and our member companies can provide solutions within the supply chain to help achieve that goal. Fortunately, great advancements in power conversion efficiency have been made in recent years with zero or nearly zero incremental cost. These high efficiency power conversion solutions are key to the cost-effective reduction of energy use in battery charger systems."

#### 4. Notebooks and other high tech products already have design goals that will allow them to meet the proposed CEC standard

The EU Standby regulation (Lot 6 (EC) No 1275/2008) requires products sold in the EU to use no more than 1W in Off mode since January 2009, and no more 0.5W from January 7, 2013. High tech products and other products designed for global markets therefore already have design goals to meet this EU standard. Note that this is not the case for BCS designed specifically for the US market which are not currently regulated.

The EU Standby standard and the proposed CEC standard overlap for the power used by the product in Off mode, but the CEC standard also includes battery charging energy and uses a different metric, as shown below:




This comparison of the two standards shows that the proposed CEC standard is less stringent than the EU tier 2 standard: A notebook meeting the exact EU Tier 2 limit would use approximately 0.8W on the CEC combined metric, compared to the CEC limit of 1.05-1.15W (depending on battery capacity). Therefore products designed to meet the EU Standby Tier 2 requirement will automatically meet the proposed CEC requirement.

This analysis also shows that most notebooks currently on the market could even meet a more stringent 0.8+0.0021Eb combined No Battery and Maintenance limit, but that would be tight and would provide little margin for manufacturing tolerances.

## 5. The proposed efficiency mark is a key enabler for BCS market transformation

The efficiency mark provides a mechanism that makes it easy to identify the efficiency of a BCS, by replacing multiple metrics by a simple 1 to 4 numeral:

### Proposed mark and efficiency levels



Level	Description	Standard
BC I	Least efficient	Less than BC II
BC II	Efficient	CEC and DOE standards
BC III	Most efficient	For Energy Star and utility incentives
BC IV	Future use	Future Energy Star and utility incentives

- Anchor protocol with California proposed standard at level II
- Leave one level below California to allow other jurisdictions to mandate labeling without minimum requirement



The efficiency mark provides regulators with a framework for consistent regulations globally. Industry will benefit from having a consistent set of regulations to design to and comply with. The mark is not intended to be a consumer facing label like Energy Star, it is targeted at regulators and industry.

The proposed efficiency mark is not meant to be California-specific, it is intended to be adopted nationally and potentially internationally. It is modeled after the External Power Supply (EPS) mark which was hugely successful and instrumental in transforming the EPS market globally.

NRDC encourages the Commission to include the BCS efficiency marking requirement in California's BCS standard.

## Conclusion

NRDC thanks the Energy Commission for its leadership in establishing an effective standard to capture cost effective energy efficiency opportunities in battery chargers in California. We look forward to continuing to participate in this proceeding.

Thank you for your consideration of NRDC's comments.

Respectfully submitted,

A handwritten signature in blue ink, appearing to be 'PD' followed by a stylized flourish.

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