

## REQUESTS FOR COMMENT

### Battery Chargers and External Power Supplies

*Although DOE welcomes comments on all aspects of its proposal, DOE is particularly interested in receiving comments and views of interested parties concerning those issues listed below.*

*This list is reproduced from section VII.E of the notice of proposed rulemaking, which was published in the Federal Register on March 27, 2012. Three additional requests for comment that are included in the public meeting slides but not in the notice appear at the end of the list.*

1. DOE requests interested party feedback, including any substantive data, regarding today's proposed standard levels and the potential for lessening of utility or performance related features.
2. DOE requests interested party feedback on whether the standards proposed in today's rule would necessitate the use of any proprietary designs or patented technologies.
3. DOE seeks comment on its analysis of the costs and benefits of the standards proposed in this rulemaking, including but not limited to DOE's analytic assumptions as highlighted in the list of issues herein. More specifically, DOE seeks comment on the Agency's estimate that the proposed standard for battery chargers lead to between \$92.8 million and \$98.3 million in cost *savings* (i.e. negative costs) relative to the assumed baseline. Recognizing that the cost models used for this analysis have certain limitations, DOE seeks comment on the assumed market failure the agency has identified as the underlying reason that private markets have not taken advantage of these cost savings in the absence of this proposed rulemaking. DOE also seeks comment on key assumptions that contributed to this estimate, including but not limited to assumptions regarding energy consumption, shipments, and manufacturer costs, treatment of existing regulatory requirements for battery chargers and EPSs, and treatment of Energy Star and other emerging technologies in both the baseline and standards cases. Finally, DOE seeks comment on the assumption that incremental product costs for battery chargers are negative because of a shift in technology from linear power supplies to switch mode power for the larger battery chargers in product classes 5, 6, and 7.
4. DOE seeks comment on its estimates of battery charger and EPS shipments, lifetimes, and efficiency distributions for each application and product class. DOE is especially interested in receiving comment on its assumption that EPSs for mobile phones and smartphones are likely to standardize around a common connection standard and, as a result, remain in use beyond the lifetimes of their associated applications (an average lifetime of 4 years as opposed to an average lifetime of 2 years).
5. DOE seeks comment and related data on which battery charger and EPS applications are used in the commercial sector, what fraction of shipments are to the commercial sector, and how product lifetimes and usage may differ between residential and commercial settings.
6. DOE seeks comment on its proposed approach in classifying EPSs that indirectly operate consumer products and whether that approach requires modifications. If changes are required, DOE seeks specific suggestions on how the proposed approach should be altered.
7. [OBSOLETE]

8. DOE seeks comment, information, and/or data on whether the proposed standards would impact any features in the regulated products or in their associated complimentary applications. If so, DOE seeks comment as to whether these impacts would impact the utility of either the product or the application, and on whether, how, and to what degree consumer welfare might be impacted by the proposed standards.
9. DOE requests any information regarding existing products that may seem to be able to be classified in multiple product classes.
10. DOE seeks comment on possible issues of electromagnetic interference and/or radio frequency interference associated with switch-mode power supplies (SMPS) used with amateur radios, including design options for reducing or eliminating interference.
11. DOE would like to request any feedback on the proposed approach to determining the average efficiency for multiple-voltage EPSs.
12. DOE seeks comment on its methodology for generating CSL3 and CSL4 for high-power EPSs.
13. DOE seeks comment on its proposal to set a standard for multiple-voltage EPSs as a continuous function of output power.
14. DOE seeks comment on its proposed approach in calculating unit energy consumption for battery chargers and the appropriateness of the various equations to calculate this consumption that are presented in today's proposal.
15. DOE seeks information, including any substantive data, to help it assess factors of durability, reliability, and preference of transformer based battery chargers versus those incorporating switch-mode power supplies.
16. DOE seeks comment on its proposed approach in developing a cost-efficiency relationship for battery charger product class 6.
17. DOE requests comment on the results of its LCC and PBP analyses, particularly with respect to the projected results for multiple voltage EPSs (i.e., product class X). In addition, DOE requests comment regarding the Agency's approach of calculating LCC by averaging estimated installation costs within subproduct categories. Further, DOE requests comment on the household debt equity discount rate applied specifically to the LCC cost analysis. Finally, DOE requests comment regarding the segregation of the LCC analysis and consumer price impacts, which are separately addressed in a shipment-based analysis.
18. DOE seeks comment on its treatment of the market path, markups, and MSP estimates.
19. DOE seeks comment on its use of a roll-up market response, which projects that only those products which fall below a standard will improve in efficiency, and that the same products will only improve in efficiency so as to meet, but not exceed, the efficiency required by the standard. DOE further seeks comments on the assumptions regarding efficiency distributions in the baseline, such as the extent to which the worst and best energy performers are and are not represented in the baseline.
20. DOE seeks comment on whether, and to what extent, battery charger efficiency would be likely to improve in the absence of standards, including the assumption that battery charger efficiency will not improve between today and the compliance date in 2013.

21. DOE seeks comment on its assumptions about the extent to which, if at all, EPS efficiency will improve for product classes B, C, D, E, X and H in the absence of mandatory standards, both prior to and after 2013.
22. DOE recognizes that significant variation in use exists for battery chargers, EPSs, and the applications they power. In an effort to ensure the accuracy of its assumed usage profiles, DOE seeks substantiated estimates, with supporting data, of usage profiles for battery chargers, EPSs, and the applications they power.
23. DOE seeks comment on its EPS loading points, as well as test results that will allow it to improve the accuracy of those loading points.
24. DOE seeks comment on its estimate that shipments of EPSs and battery chargers are inelastic and on other elasticity assumptions DOE has made. DOE further seeks comment, information, and data regarding DOE's market assessment of EPSs and battery chargers via complimentary applications with which these products are nearly always bundled.
25. DOE seeks comment on its estimate that substitution impacts for EPSs and battery chargers are negligible.
26. DOE seeks comment on the methodology employed for conducting the National Impact Analysis, including the calculations of National Inventory, National Energy Savings, and Net Present Value.
27. DOE seeks comment on its estimates regarding the proportions of certain applications – including mobile phones, MP3 players, GPS equipment, and personal care products – that ship with EPSs designed to directly operate the application versus indirectly operate the application.
28. DOE seeks comment on what level of efficiency EPSs in product class N already meet and whether EPSs sold in California are different in terms of their energy efficiency than EPSs sold in other States.
29. DOE seeks comment on the accuracy of its distribution models for battery chargers and EPSs, as well as its estimates off battery charger and EPS markups. To the extent that these models and estimates can be improved, DOE seeks specific suggestions and supporting data.
30. DOE seeks information concerning small businesses that could be impacted by this rulemaking and the nature and extent of those potential impacts. For example, DOE is interested in information concerning impacts on the golf cart industry that have not been captured in the current rulemaking analysis. Further, DOE seeks further information and data regarding the 'double jeopardy' EPS and battery charger impacts on small businesses as raised by commenters.
31. DOE seeks comment on whether the proposed standards would lead to lessening of market competition in the regulated industries.
32. [OBSOLETE]
33. DOE invites comment on solid-state lighting EPSs, specifically on whether there are any differences between SSL EPSs and other EPSs that might warrant treating them as a separate product class, the size of the market for these products, what proportion of SSL luminaires use EPSs, the efficiency of those EPSs, and usage patterns.

34. DOE seeks comment on whether any battery chargers exist that can only be operated on 12V input, whether a device that can be powered only from a 12V power outlet can be assumed to be designed solely for use in recreational vehicles (RVs) and other mobile equipment, and whether there are battery chargers with DC inputs other than 5V and 12V.
35. DOE welcomes comment on any and all issues related to efficiency markings for battery chargers and EPSs.
36. DOE is interested in receiving comments from industry, states, and other interested parties on the best ways to ensure a smooth transition from the battery charger standards established in California to the national standards addressed in this proposed rule.
37. [NOT LISTED IN NOTICE] DOE seeks comment on its methodology for generating Product Class 10 CSLs based on battery input power and input from manufacturers.
38. [NOT LISTED IN NOTICE] DOE requests comment on any known domestic EPS manufacturers and any additional domestic battery charger manufacturers, and whether they qualify as small businesses.
39. [NOT LISTED IN NOTICE] DOE seeks input on the length of the compliance period for battery chargers.