

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460



OFFICE OF
AIR AND RADIATION

January 4, 2006

Dear Battery Charging System Manufacturer, ENERGY STAR® Partner, or Other Interested Party:

I am pleased to present the final Version 1.0 ENERGY STAR specification for battery charging systems, effective January 1, 2006. Your valuable feedback throughout the development process has been integral to the design of the specification. Please note that EPA considers this specification to be final and has no further plans to revise it at this time. While EPA was not able to implement all stakeholder suggestions in this Version 1.0 specification, we remain open to including them in future versions when there is sufficient time for careful review and analysis. All stakeholder correspondence and versions of the Draft specification can be viewed on the New Product Specifications in Development Web page at www.energystar.gov/productdevelopment.

The ENERGY STAR battery charging systems specification is intended to complement the existing ENERGY STAR external power supply specification to comprehensively cover a variety of power conversion products. **Please note that manufacturers may only qualify a model under one specification (i.e., external power supply OR battery charging system) that best fits or reflects the power supply and product design.**

Enclosed, you will find the Version 1.0 ENERGY STAR Partner Commitments and Eligibility Criteria for battery charging systems as well as the final Test Methodology. Based on stakeholder feedback, the following minor changes are reflected in the final specification:

- Provided a new definition for individual batch chargers where multiple batteries are charged with groups of two or more batteries in series. This addition also includes an explanation of key parameters for determining the qualifying Energy Ratio for these product designs.
- Expanded the description of how to measure battery energy, including altering the definition to indicate that battery energy shall be measured at a constant current discharge rate of 0.2 C in order to be consistent with applicable IEC standards (e.g., Clause 7 of IEC 61951 and IEC 61960).
- Added a new definition for nameplate input power to clarify how to calculate this value if it isn't readily available on the nameplate.
- Simplified the nominal battery voltage definition and clarified that the provided nominal battery voltages are for known chemistries as of the writing of this specification.
- Clarified the exclusion language for battery charging systems that draw additional power for secondary functions outside of battery charging (e.g., radios, CD players, and GFI AC outlets). EPA's intent is to exclude chargers with a secondary functionality that draws power *while the battery is being charged/maintained* and not to exclude cord/cordless

models designed for operation of the primary function of the product while connected to the mains ac power.

- Extended the scope of qualifying products to include those with nameplate input power up to and including 300 watts.
- Revised the testing requirements for a la carte chargers to cover *currently available* batteries listed as usable with the unit and to specify a minimum of three tests, each with different model batteries and including those with the highest and lowest battery energies.
- Adjusted the specification levels to reflect the most current EPA data set. To be consistent with the final revision of the Test Methodology, EPA retested all of its models, leading to minor changes in the data set, particularly for a la carte multi-voltage chargers. This then led to slight adjustments in the specification levels to ensure that they continue to represent the top 25 percent of the market.

Shortly, EPA will provide all stakeholders with separate correspondence that explains how to become an ENERGY STAR partner for battery charging systems. Sample documents will be provided at that time for your review, including the Partnership Agreement, Commitment Form, Qualifying Products Test Report form, and the Logo Use Guidelines.

On behalf of EPA, I appreciate your participation in the development of this specification and look forward to working with each of you as you qualify and market your battery charging systems. If you have any questions or concerns about the specification or the partnership process, please feel free to contact me directly at (202) 343-9019 or fanara.andrew@epa.gov. Thank you again for your continued support of ENERGY STAR.

Sincerely,



Andrew Fanara, Manager
ENERGY STAR Product Specification Development

Enclosures:

- Final Version 1.0 ENERGY STAR Eligibility Criteria for Battery Charging Systems
- Test Method for Determining the Energy Performance of Battery Charging Systems (Final, December 2005)
- ENERGY STAR Partner Commitments for Battery Charging Systems