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VIA EMAIL TO: UPS@energystar.gov

Mr. Robert Meyers
Environmental Protection Agency
Energy Star Product Development
1310 L Street, NW
Washington, DC 20005

**NEMA Comments on Energy Star Program Requirements Specification for UPS Eligibility
Criteria Draft #2 Version 1**

Dear Mr. Meyers,

Thank you for the opportunity to provide the following comments on behalf of the UPS Committee of the NEMA Power Electronics Section. The Committee and Section include many of the U.S. manufacturers of UPS units. Our comments follow.

Test Methods and Procedures Comment

Rather than comment on all portions of the proposed document in every instance, NEMA reaffirms our previous comments that Energy Star definitions, test methods and reporting formats remain identical to those specified in IEC 62040-3, Edition 2. The creation of US-only deviations from the recognized international standards dilutes the power of the program and increases the burden on manufacturers by demanding region-specific requirements beyond those already extant. Energy Star should contribute to increased harmonization of markets and their products, not create disconnects. Following the guidance of IEC 62040-3 wherever possible will encourage this. NEMA understands EPA's concern over the possibility of an independent test house attempting to verify product claims and not obtaining the same results, however these tests demand a certain level of technical expertise to be accomplished accurately and effectively. We believe that the vendor should always participate in testing (both qualification and verification) to provide guidance to properly perform the test, including ensuring no energy transfer to the energy storage system. Vendor involvement will ensure the necessary experience and expertise with the IEC test methods.

Definitions

NEMA has concerns with the new definitions for section 1A3. Applications should not be referenced by wattage alone. The use of wattage appears to have been an attempt to categorize products simply. However, wattages outside those in the draft are known for other applications. There seems to be a misconception that all UPSs below 1500W are consumer. Just looking at form factors, price points, topologies and features, this is clearly false. Server class UPSs exist that are generally Class A emissions which means they shouldn't be used in residences or even small businesses. The application definitions as written in the current draft 2 might oblige manufacturers to pigeonhole their products, particularly as to how and where products will be listed in terms of consumer selection and research.

We suggest that products instead be demarcated based on combinations of EMC rating (Class A or B), and independent of phase and power capacity. Products can then be grouped in the below three categories:

- Consumer; pluggable Type A, FCC Class B, 1.5 KW and below
- Commercial; everything else not covered in Consumer and the Data Center categories
- Data Center; three phase, hardwired, FCC class A, 200 KW output power and above

A second sentence should be added to the definition of bypass mode, for clarification. “There is limited (or greatly reduced) protection provided for the load when operating in this mode.”

For clarification, rename definitions E4 to “single normal mode” and E5 to “multiple normal mode”. The same changes would apply to sections 3.2.1 and 3.2.2.

Regarding clause 2.1.2, we are concerned that the UPS standard’s requirements for refurbished/remanufactured products are inconsistent with other IT related categories and we feel that the same rules for other IT equipment should be applied to UPS as well. The only products which seem to already have this requirement are vending machines, which UPSS are not related to. To that end, clause 2.1.2 should be struck.

Table 1

Remove column for power classification, based on our above argument concerning the definition of consumer, commercial and data center product demarcation.

Regarding Data Center weighting averages, NEMA believes that a spread of 20/30/30/20% is more accurate. This is due to the apparent lack of hard data on everyone’s part, and as such a more even spread is the more logical approach. NEMA is willing to assist EPA in surveying the industry to determine loading averages if desired.

Table 2

The column for Class should be removed based on our above argument concerning the definition of consumer, commercial and data center product demarcation.

Regarding the note for table 2, NEMA disagrees with EPA’s assessment of consumer desires and argues this note should be struck.

NEMA recommends the below modifications to Table 2

Output Power	Input Dependency		
	VFD	VI	VFI
$P \leq 1500 W$	96.5%	96%	$0.0099 \times \ln (P) + 0.80$
$1500 W < P \leq 10,000 W$	97%	96%	$0.0099 \times \ln (P) + 0.80$
$P > 10,000 W$	97%	95%	$0.0099 \times \ln (P) + 0.80$

To ensure adequate margin in small products with a test setup accuracy variance of up to half a percent, slightly lower limits are requested.

NEMA members could not reach consensus on clause 3.2.2, as a result members were recommended to send individual suggestions to EPA directly.

Regarding Section 3.5; RoHS is not related to energy efficiency so the section should be struck except to say that manufacturers may declare RoHS compliance on their data sheets.

PPDS Sheet

- Recycling and recyclability is not relevant to an energy savings program (line 63). Since most batteries used are lead acid they are highly recycled and as such the proposed measure is redundant. The addition of a new requirement brings little if any added value to the customer or environment.
- IEC 6240-4 is being developed and is a more appropriate standard for the topic of environmental concerns, rather than Energy Star. Future version of Energy Star can then reference the IEC standard. Accordingly, the “other environmental considerations” portion should be struck (lines 26-28).
- Communication and Measurement section: remove all references to “accuracy” since no references are specified or agreed to by all of industry. NEMA recognizes the desire by some customers and manufacturers that an UPS have energy and power metering capability. We support the inclusion of a like item where a manufacturer can report Y/N that their unit has power measurement and/or energy measurement capability, but with the caveat that it this not typically revenue-grade information.

Additional Comments

Regarding energy metering, NEMA feels this doesn't belong in an efficiency recognition program for UPSs. Metering in detail is not an essential performance feature or suitable criteria for UPS qualifications. The UPS is not the ideal place to meter in data center environments (where we understand metering requirements exist). Having such a requirement adds cost, potentially reduces the number and selection of qualified units, and adds unnecessary features which may not be desired or useful to the customer. Stand-alone meters installed in the appropriate places in the data center will result in fewer meters that are easier to use and more accurate than UPS-based metering. Lastly, because there are so many changes being made to draft v2, NEMA strongly suggests that a draft 3 be created and circulated publicly for comment. Draft version 2 is not at the stage where it is being tweaked, it is being heavily modified and as such needs more work before it can be finalized.

Conclusion

Thank you for your consideration of these comments. We look forward to working with you further on this important project. If you have any questions on these comments, please contact Alex Boesenberg of NEMA at 703 841 3268 or alex.boesenberg@nema.org.

Sincerely,



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