

Anonymous Comments on ENERGY STAR® Program Uninterruptible Power Supplies (UPS) Final Draft Version 2.0 Specification

ENERGY STAR UPS Version 2.0 Eligibility Criteria

- 1) What if we have a UPS with one model number but it can operate at and is rated for a 3-phase voltage using a non 1-15P / 5-15P plug and can also operate at and is rated for single phase 115V 60Hz using a 1-15P/5-15P plug? I would think that there would be some modification made to the input circuitry to accept a 3-phase vs. single phase so I would think that it must be tested twice for ENERGY STAR compliance at both voltages, once using CFR test method at 115V and again using ENERGY STAR test method at 3-phase voltage, correct?
- 2) Section 3.2.1 states:

“Single-normal-mode UPSs: Average loading-adjusted efficiency (Eff AVG), as determined per Appendix Y to Subpart B of 10 CFR 430, or if not applicable, as calculated per Equation 1, shall be greater than or equal to the Minimum Average Efficiency Requirement (Eff AVG_MIN), as determined per Table 2, for the specified rated output power and input dependency characteristic.”

Is there a reason why sections 3.2.2 and 3.2.3 for multiple-normal mode UPS do not include the highlighted reference to Appendix Y as above for single-mode? I believe multiple-normal mode UPS fall under the scope of the Appendix Y test method. Perhaps I'm missing something?

EPA and DOE Guidance Document on UPS Version 1.0 Test Method

- 1) Would the guidance in [Appendix A] still apply to Ver. 2.0 of the UPS spec? If so perhaps the guidance that is still relevant and applicable should be incorporated into the new 2.0 spec.

ENERGY STAR UPS Version 2.0 Test Method

- 1) I think it would be good to add, perhaps in section 3 of the ENERGY STAR test method, the tolerances for input voltage, frequency, and also output load power tolerance. I don't think these are discussed in all of the test reference standards for the DC output UPS's.

Appendix A



Guidance on the UPS Version 1.0 Test Method

Last Update: October 18, 2012

Dear ENERGY STAR Uninterruptible Power Supply (UPS) Partner or Other Stakeholder:

On May 10, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) published the UPS Version 1.0 Final Test Method following an extensive development process that involved industry stakeholders. Since then, stakeholders have submitted additional questions on the test method and DOE has decided to provide further guidance on the UPS Version 1.0 Test Method:

Topic	Additional guidance
General	All settings that are not explicitly covered in the UPS Version 1.0 Test Method should be left in their as-shipped (e.g. default) configuration.
Section 3.B – 3-phase and single-phase power	UPSs that support both 3-phase and single-phase input power shall be tested using 3-phase power.
Section 5.B – steady-state check at 0% load	The steady-state check only applies to the stability of the conversion efficiency under active loads. Thus, the steady-state check is not necessary for the 0% load condition. However, the UPS shall still be thermally stabilized after 125% of the manufacturer-specified stabilization time for 0% load, as described in section 5.B, before the power measurement performed in 5.C.
Section 5.C.2 – measurement period	To allow testing flexibility, energy measurements may be taken for greater than 15 minutes. In this case, the calculation of P_{AVG} using Equation 1 shall use the actual measurement period for t . DOE data indicate that measurement durations greater than 15 minutes will not affect the resulting average efficiency.

Thank you for your support, and please direct any test method questions to Bryan.Berringer@ee.doe.gov.

Sincerely,

Bryan Berringer

DOE Test Method Lead for ENERGY STAR UPS Program