

ENERGY STAR Uninterruptible Power Supplies Draft 2 Version 2.0 Comment-Response Document

Topic	Subtopic	Stakeholder Comment	EPA Response
DOE Rulemaking		Two stakeholders commented that DOE rulemaking is still not published and it remains uncertain whether it will be published soon. Both stakeholders commented that if EPA is to follow its current timeline for finalizing the UPS specification, the specification would be coming in effect a year in advance of the DOE rulemaking, which would cause burden for the industry and consumers. Both stakeholders commented that the requirements are too stringent if the DOE rulemaking is not in place, with one specifically calling out VI and VFD requirements and the other suggesting breaking up the update into two separate revisions, with the second one coming after the publication of the DOE rule.	EPA is concerned that delaying the VI or VFD requirements would continue the current situation where a high proportion of models can qualify for the ENERGY STAR. Alternatively, setting multiple, staggered requirement levels could be confusing and open up the requirements to further discussion within a year. Therefore, EPA continues to propose one set of requirements that will take effect at least one year prior to the DOE Final Rule.
Efficiency Levels	Measurement Error	Two stakeholders commented that EPA should take into account a 0.5% measurement error when determining efficiency levels for VFD and VI UPSs. Alternatively, one stakeholder recommended ensure that at least the top 20% of the market meets ENERGY STAR without factoring in the 0.5% measurement error.	EPA understands UPS test method results, which underpin the analysis of Version 2.0 requirements, are subject to 0.5% measurement uncertainty. However, the uncertainty could cause the measured efficiency of a sample to be lower as well as higher than the mean. However, without factoring in the potential measurement error, EPA has been able to develop requirements that can be met by over 20% of models in all categories, assuming the publication of the DOE Final Rule and that ENERGY STAR models represent 73.5% of the market.
Efficiency Levels	VFD and VI	Two stakeholders commented that the VFD and VI efficiency levels are too high. One stakeholder mentioned that the proposed efficiency levels would exclude all but a select few products from the market. The stakeholder expressed concerns about the industry's ability to redesign products fast enough to meet the requirements, and may result in a decrease in industry participation in the ENERGY STAR program and fewer choices for consumers.	With no DOE Final Rule, and providing no allowance for measurement uncertainty, 19 unique VFD models and 10 unique VI models (between 350 and 1500 W), though some of these are exactly on the requirement line. Both the pass rates and the graphs rely on reported, rather than calculated, data. The reported (rather than calculated based directly on measurement) values may include any manufacturer-desired margin and include an adjustment for the battery connection now included in the DOE test method. This number is expected to increase as manufacturers redesign their models to meet the DOE Final Rule. Additionally, EPA has updated the VFD and VI ≤ 350 W requirements and the VI 1500 W $< P \leq 10,000$ W requirements to permit additional models to meet in those categories. Finally, EPA noticed that the graphs presented during the Draft 2 webinar on October 7, may not have been presenting the data accurately. The corrected graphs have been released with the Final Draft.
General		Two stakeholders expressed support for the Version 2.0 UPS specification revision given the long lifetime of Version 1.0	EPA thanks stakeholders for their support.
Test Method	DC Output	One stakeholder commented that the test method is not clear in identifying the cutoff between a high-voltage UPS and a low-voltage UPS, which would cause confusion in determining which test method to use. The stakeholder recommends drawing the cutoff at 100V.	EPA noted that the test method references the specification, which sets 60 V as the cutoff between low- and high- voltage UPSs. EPA will include the specification language in the test method to make this cutoff more clear for stakeholders.
Test Method	Humidity	One stakeholder commented that a 0-100% relative humidity condition could affect proper product operation. The stakeholder instead propose setting the humidity range to that "specified by the manufacturer", citing that DOE test procedures commonly use this terminology.	EPA has revised the humidity range to that specified by the manufacturer.
Test Method	Significant Digits and Rounding	Two stakeholders commented that the significant digits and rounding requirements in the specification be updated for consistency with DOE regulations. Specifically, they recommend modifying Section 3.1.1 from "all calculations be carried out with unrounded numbers" to "all calculations be carried out the measured values rounded to the third decimal place". In addition, the stakeholders recommend updating Section 3.1.3, which specifies that "UPSs capable of operating at 115 V and 60 Hz that use NEMA 1-15P or 5-15P plug" have calculated efficiency values rounded to one tenth of a percentage point to instead say that "all UPS units" be calculated to one tenth of a percentage point.	EPA proposes to extend the DOE rounding rules to all products—not just those within the scope of the DOE test procedure. This will avoid confusion from having two sets of rounding rules for interpreting the specification. In addition, EPA has clarified the statement in Section 3.1.1 that it applies in the absence of the DOE rounding rule.