

16th November 2011
EBR

Comments from the CEMEP on the EPA ENERGY STAR® for UPS Draft 3.0 (V1) documents (Product Specification and Test Method for UPS)

1. General comment

The CEMEP UPS thanks the EPA for taking into account most of the comments, previously sent, on ENERGY STAR for UPS Specification and test method draft 2, and thank you also for having the opportunity to make comments for the Draft 3. CEMEP support globally the good improvement made on this third draft and would like to pursue its collaboration by sending the following comments.

2. Comments on Product Specification - Eligibility Criteria Draft 3 V1.0:

2.1. Still we would like to re-insist on the fact that all definitions and classifications have been elaborated for Static UPSs only. As the scope of this EPA document is including Rotary UPSs and because there's no International Standard for Rotary UPSs to give as reference, there is a need to validate that all definitions, classification and measurement methods are also applicable to Rotary UPS. We have not seen any evidence that test method and classification defined for Static UPS are applicable to Rotary UPSs. It could be misleading for customer to compare efficiency data from different products measured with a method validated only for a part of its.

2.2. The note in definition of Reference Test Load from IEC 62040-3 permits "when in test-mode and subject to local regulations, the UPS output to be injected into the input a.c. supply." This allowance has been withdrawn from EPA Specification (§ 1.G.). We think the method specified in IEC 62040-3 is viable and accurate enough at least for VFI type UPS with high power rating (> 100kVA). This method allows saving a lot of energy during Efficiency measurement campaigns where UPS are feeding resistive load which dissipate many GWh.

→ CEMEP would propose to keep this allowance at least for UPS with a power rating higher than 100 kVA.

2.3. The UPS Minimum Power factor requirement 0.90 (§3.4) is not well defined in term of classification of UPS (VFD, VI, VFI) and output power. Requiring Power factor of 0.90 at low power is not realistic and the comparison of Power factor is of interest mainly for VFI product.

→ CEMEP would propose to define the Minimum Power factor requirement at 100% resistive Load and only for VFI UPSs.

3. Comments on Product Specification Test method Draft 3.0 (1):

3.1. All measurement methods have to refer only, when existing, to IEC 62040-3 Ed 2 (April 2011).

3.2. The requirements to guaranty Thermal Stability (§ 5.A) is not fully identical to IEC 62040-3. The sufficient length of time to reach steady state condition should be determined by adding 25 % more time to “temperature rise time” measured during type tests as specified by IEC 62040-3 standard. The proposed method with several average power measurements (for a duration of 5 minutes) with less than 1% difference between consecutive measurements could be difficult to use in practical with classic installations and furthermore, we do think, have not been tested on large UPS. This procedure could draw to the use of stabilized environment for the UPS under test and the resistive load. That constraint would not be affordable, at least, for high power rating UPSs (> 100 kVA).

→ CEMEP would suggest for Thermal Stability to use for EPA test Method exactly the same requirement as in IEC/EN 62040-3.

3.3. The Efficiency measurement (§ 5.B) is not identical to IEC 62040-3. The method by accumulation of Wh on a 15 minutes time window is not defined in detail and have not been widely used and validated as the one in IEC 62040-3. Moreover this method would burden with new unneeded constraints an already heavy process. The IEC 62040-3 standard has been approved with two methods (standard J.3.1 and alternative J.3.2) depending on accuracy of measurements (instruments). This method have been validated and already successfully used by CBs with reproducible results.

→ CEMEP strongly recommend keeping the efficiency measurement test procedure from UPS standard IEC 62040-3.