

Arthur, following are [manufacturer name withheld] comments on the Energy Star Program Requirements for Computers Draft 1 Version 4.0:

The reference to 61000-3-2 under the Internal Power Supply Requirements heading should be removed at this standard only applies the European networks operating at 230/400 Vac. The harmonic current emission limits in the standard are based on the European IEC 60725 reference impedance and compatibility levels in IEC 61000-2-2. Power factor is comprised of distortion and displacement.

Displacement power factor, or the phase angle between fundamental voltage and current, is not directly related to harmonic emissions.

The specified voltage for power supply efficiency measurement is not clear. For power supplies that are autoranging, i.e., can accept any voltage in the range of 100-240 Vac and frequency of 47-63 Hz, the manufacturer should have the option to choose the input voltage.

Power supply internal fans should not be factored into the power supply efficiency. Fans are load at the output of the power supply, not conversion loss.

[manufacturer name withheld] questions the need for standby, sleep, and idle limits for workstations.

Besides having a small percentage of worldwide shipments compared to PCs (per data from the Consumer Electronic Industry, workstations account for less than 1%), workstations are an integral part of grid computing. Grid computing helps improve the efficiency and usage of IT resources by exploiting under-utilized computing and storage. Workstations are also designed for computational speed and performance as well as graphic capability for CAE and CAD. If the EPA is certain that limits must be established, the limits must be generous at first to ensure technology and innovation is not impacted. The standby mode must consider the power consumed by management control function through a service processor, etc. that must be kept alive to provide the necessary level of network response. Sleep and idle modes that cause a reduction of internal temperature based on the power consumption target must take reliability into account.

Internal temperature changes can cause thermal cycles, or the expansion / contraction of dissimilar metals.

Over time, this repeated action can cause equipment failures. The sleep and idle mode targets must not be too low or power supply efficiency can be negatively impacted, especially below 20% load.

In general, any limits, especially for desktop-derived servers and workstations, must be sliding scale based on the size of the power supply. Desktop-derived servers and workstations typically have larger power supplies than desktop computers to support the performance, throughput, and new technologies that are demanded in the marketplace.

Finally, [manufacturer name withheld] agrees with the ITIC positions that have been submitted to the EPA on timing of requirements, etc. If you have any questions, please contact me. thanks.