

8/26/05

RE: Comments by Consumers Union on Energy Star revisions.

Consumers Union, independent non-profit publisher of Consumer Reports Magazine, appreciates the opportunity to comment on the recently proposed revisions to EPA's Energy Star criteria for computers and notebooks. We are pleased that EPA is updating these important criteria and would like to offer the following comments:

Desktops:

General: We agree with including a power factor requirement for the power supply in Energy Star computers. We also agree that 80% efficiency is a reasonable requirement.

Active Mode: To stress processors in a repeatable way, we use a small application (originally from Intel) called "3D Twist", that computes an animated 3D graphic object and sends frames to the display processor as fast as it can accept them. This usually boosts power consumption 30% to 50%. We recommend the EPA define a method such as this in the Energy Star requirements.

Idle Mode Definition: In our work, the idle mode is tested "as received", with auto-loading software running and network connectivity established, boot processes and background tasks completed, but no applications launched. However, we recognize that some processes may run automatically on an intermittent basis. These might include software updates, drive indexing, antivirus scanning, and self-diagnostics. For this reason, and for the reason that delivered software loads may vary between samples of a model that allow optional configurations, we think it is reasonable to allow a manufacturer to use a "quiet boot" condition, under which any intermittent tasks are turned off, provided the manufacturer can assure that no such task would normally run more than 10% of the time in the idle state over the long term.

Sleep Mode Definition: It should be acknowledged that the power management settings in some operating systems (eg: Windows) call sleep mode (S3) "Stand By", which is NOT the same as the "standby" state specified in IEC 62301, which is actually the "Shut Down" (S5) or "Hibernate" (S4) state for most computers.

Power Management Requirements: Wake-on-LAN: On some computers, WOL may work only from S4 (hibernation), not S5 (shut down). This should still qualify the PC for Energy Star, since the power consumption in S4 is essentially the same as S5. This limitation may actually be an advantage, allowing the user to use S5 to assure that WOL will not activate a PC when it is not needed for an extended time, such as while on vacation. We suggest requiring manufacturers to set the power button default to initiate S4 rather than S5. (This is the usual case for most brands of laptops we test.)

CU applauds any EPA initiative for educational outreach to consumers regarding power management. One such "myth-busting" tutorial might include the fact that a "screen saver" saves neither the screen nor energy. Another thing would be to encourage consumers to specify Energy Star when it is an option, as in Dell OptiPlex PCs. (From Dell's website: "Most OptiPlex configurations can be ENERGY STAR compliant. To get an ENERGY STAR logo on OptiPlex systems, the ENERGY STAR option MUST be ordered. When ENERGY STAR is ordered, the Dell factory will install the logo, ensure compliance and set the S3 timer to 30 minutes. (Power Scheme set to "Dell Low Power").")

Notebooks (additional to above comments that may apply):

General: Suggest specifying that a normal-capacity battery be installed and fully charged prior to power tests. It should also be specified that the display brightness be maximized, as this accounts for a large portion of notebook power consumption. Also, for models that have ambient light tracking, the incident brightness should be specified (eg: 500 lux).

Active mode: Our testing indicates that an active power of 50 watts may be necessary to encompass more than a tiny minority of recent notebooks.

Idle mode: Our testing indicates an idle power of 20 or even 25 watts may be necessary to encompass more than a tiny minority of recent notebooks.

Battery charging: An issue to be investigated is the efficiency of the battery charging cycle. Some charging circuits seem to waste a lot more heat than others. Perhaps a specification would be appropriate for total watt-hours needed to charge a normal-capacity battery from depleted (auto shut-off by the notebook) to full charge as indicated by the charge-indicator lamp on the notebook (and verified by the charge meter on the notebook after startup).

Thanks for the opportunity to provide input to this program. If you have any questions, I can be reached at (914) 378-2420.

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