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ENERGY STAR® is a U.S. Environmental Protection Agency program helping businesses and individuals fight global warming through superior energy efficiency.

Dear ENERGY STAR® Computer Partner or Other Industry Stakeholder:

*[This is an excerpt from a communication issued to stakeholders on June 19, 2009 with the subject "ENERGY STAR Computer Program: OPS system now available for V5.0 submittals." The original email contained text regarding OPS availability, which is here omitted, and the two clarifications to the Version 5.0 specification listed below. The Power Factor clarification has been amended to include the revised wording of the power factor requirement for internal power supplies]*

#### **Clarifications to Version 5.0 Computer Specification**

**Power Factor for Low Output Internal Power Supplies:** As introduced in an email to stakeholders on May 26, EPA will revise the Version 5.0 specification to provide an exemption for internal power supplies with maximum rated output power less than 75W from the power factor requirement for internal power supplies. The only comment received during the comment period on the proposal was related to framing the exemption in terms of output power rather than input to align with the ENERGY STAR Server Specification requirements, and EPA has reflected this suggestion in the final guidance.

**Computers Using an Internal Power Supply:** 85% minimum efficiency at 50% of rated output and 82% minimum efficiency at 20% and 100% of rated output, with Power Factor  $\geq 0.9$  at 100% of rated output. **Note: Internal Power Supplies with maximum rated output power less than 75W are exempt from the Power Factor requirement.**

**Step 9f of the Test Procedure (Appendix A):** EPA was informed of upcoming technologies that facilitate optimized hard drive operation by through the presence of permanent, non-removable specialized cache on the motherboard. While not internal to the drive, such features mirror the desired function of integral disk cache in hybrid drives. EPA had not intended to hinder such technologies in step 9f of the Appendix A test procedure with the description of drive cache and will change the text of this test procedure step to the following:

- f. Primary hard drives may not be power managed ("spun-down") during Idle testing unless containing non-volatile cache integral to the drive (e.g. "hybrid" hard drives **or similar non-removable disk caching architectures**). If more than one internal hard drive is installed as shipped, the non-primary, internal hard drive(s) may be tested with hard drive power management enabled as shipped. If these additional drives are not power managed when shipped to customers, they must be tested without such features implemented.

Thank you for your continued support of the ENERGY STAR program.

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