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Comments on Tier 2 Discussion Guide

Fujitsu would like to offer our answers to Discussion Questions in the Discussion Guide: Version 4.0 Tier2.

A. What challenges does platform dependence introduce to the ENERGY STAR Computer program?

It may introduce the problem that the difference of language or version of the OS may vary its performance. In the worst case, EEPA tool doesn't work normally. The difference of firmware, drivers and BIOS may vary the measured performance value.

B. How can performance under different EEPA workloads best be integrated into ENERGY STAR?

It should be considered carefully. We think it should be decided after conducting testing with the EEPA tool on many products.

We think it should be also considered for PCs which have various components installed, such as W-tuner (PCs having two internal TV tuners). This type of audio-video equipment like PCs would be used in different way as normal home use PCs, so different workload settings would be needed. If they'll be tested as home use PCs, it's necessary to make a rule for it to allow TV tuners to be turned off while measuring power consumptions.

C. Do stakeholders believe that when paired with a calculated annual energy use value, an EEPA tool like EEcoMark will be a reasonable means of comparing the energy use of desktops? Notebooks?

Yes, we believe so. But the tool should be regarded only as measurement tool. It needs to be cautious to use the value in communication with end users as the tool simulates annual energy use.

D. Should the EEPA take into account different usage patterns for businesses compared to home users in arriving at a consensus usage scenario?

The different usage patterns should be taken into account between businesses and home users.

The simulation of annual energy use shouldn't be taken into account. Both business and home usage form may become too complex to simulate it.

E. Should the EEPA reflect typical usage patterns of computer users in all ENERGY STAR countries in arriving at a consensus usage scenario?

IT environments for respective countries should be taken into account. Usage patterns should be determined country by country and, if common patterns are applied, they should cover only basic area.

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F. (No comment)

G. (No comment)

H. Should EPA use the same approach used in Tier 1 for Workstations or should they be handled differently?

EPA should be careful to change the approach. Different handling should be taken into account after finishing evaluation of Tier 1.

I. (No comment)

J. Should Thin Clients be evaluated alongside other computer categories in the ENERGY STAR Computer Specification? What research is available on energy consumption of thin clients and their impact on overall data center energy use?

Since market trend is not foreseeable and system configurations vary, we think it's not the time to discuss about Thin Clients.

K. (No comment)

L. Will an EEPA approach lessen the dependence on categorization of systems, as was done for Idle State requirements in Tier 1?

We hope so. Tier 1 doesn't have different spec for TV tuner installed PCs, so it decreases the diversity of products and, consequently, will narrow down end users' selection range of ENERGY STAR products. We strongly recommend taking into account it when making EEPA tool.

M. Are the Tier 1 component-level requirements for internal/external power supplies appropriate when used in conjunction with an EEPA tool such as EEcoMark? Alternatively, if they are appropriate, should component level requirements for internal/external power supplies be made more stringent?

It is not appropriate to apply component-level requirements. The efficiency only of whole product should be taken into account. The power supply efficiency should be evaluated by total power efficiency of the system. As for individual unit, it should be only guideline in the marking protocol for efficiency performance.

N. ENERGY STAR's existing Tier 1 framework requires measurement of desktop computers and workstations with keyboard and mouse attached. Consistent with these measures to create a realistic testing situation, should

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any commonly used peripherals be included in Tier 2 test procedures to accurately reflect real-world usage (i.e. keyboards, mice, USB peripherals, docking stations)?

Peripherals should not be included in the standards or test procedures, because peripheral suppliers are so diversified by country that peripherals' spec may vary.

O. (No comment)

P. (No comment)

Q. (No comment)

R. (No comment)

S. What data collection is necessary to support the EEPA tool development? To support meaningful ENERGY STAR requirement levels?

Before discussing this subject, it should give more priority to spreading openly the information of EEPA tools in early stage.

T. When a final list of qualifying Tier 2 computers is eventually posted to the ENERGY STAR web site, the program intends to post annual energy consumption figures and performance information to better inform consumers. Posting of this information is also being proposed for televisions. EPA invites feedback on this plan.

It is very difficult to estimate annual energy consumption figures in computers. Cautious handling is required because it may cause troubles with end-users on the differences between estimated energy consumption and actual consumption. In our country, we had a big problem with estimated annual power consumptions of refrigerators. A lot of customers complain about differences between estimated figures and actual figures. It needs to pay attention to and take into consideration the fact that PC is not mono-functional product like TV.