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Comments on Tier 2 Preliminary Draft ENERGY STAR® Program Requirements for Computer Servers
Fujitsu Technology Solutions (FTS)
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Page	Line	Requirement / Definition	Comment
8	358 - 360	**Y. Product Family** • Use the same number of processors. All processors must be represented by the same model line and have identical power specifications and core counts (e.g., processors may vary in speed within the same power specification within a given model line);	Product family definition is too stringent. The current definition requires that the processor core count and TDP (Thermal Design Power) must be the same in a product family. In real servers a much wider range of processors can be used in terms of TDP and core count. The current definition leads to artificial sub-segmentation of products which causes confusion at the customer site. The definition should allow the usage of all processor types offered by a vendor within a server product.
13	432	**Approach** In preparing this Preliminary Specification, EPA conducted an initial investigation of a Net Power Loss (NPL) approach for Computer Server power supplies. Among the driving factors for an NPL approach are that the existing power supply efficiency approach requires power supplies to perform efficiently in power ranges where they may not operate (e.g., 100%), can give insufficient attention to where they do operate, and ignores the benefits and impacts of right-sizing, redundant power supply installations, and multiple power supply installations. …	FTS proposes to stay with a power supply efficiency approach as such a representation is commonly accepted for technical system

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17	455	**Approach** Assessment of active mode across a broad range of operating conditions is an important goal of the Tier 2 specification. The Tier 1 specification set the stage for this effort with Active Power requirements that centered on idle power limits for 1-Socket and 2-Socket server, power management requirements for 3-Socket and 4- Socket servers, and mandatory reporting of idle and max load power. …	FTS proposes to add an active mode efficiency rating tool. Datacenter operating concepts focus more and more on higher utilization of servers. Therefore the idle mode power consumption will become less important in future.
20 - 21	549	Included above is a provision to require implementation of the Energy Efficient Ethernet standard upon availability of appropriate hardware. EPA understands that products meeting the 802.3az standard are expected to be adequately available on the market around the expected effective date in October 2010. EPA plans to commence future specification development to improve the efficiency of network equipment. Inclusion of this Energy Efficient Ethernet requirement in Tier 2 for Servers will help set the stage for those efforts and help set a foundation for a more efficient network ecosystem. This requirement will not apply to physical layers unable to support 3az, including fiber and 40 and 100 Gbps copper. The EEE standard requires Link Layer Discovery Protocol (LLDP) for 10 Gbps Ethernet, but is optional for 1 Gbps. ENERGY STAR will evaluate LLDP support for 1 Gbps Ethernet in preparation of future Tier 2 drafts.	The release of new server products requires some development time. The availability of components like LAN chips must be ensured in the initial design phase already. This requirement is not yet fulfilled in case of IEEE 802.3az compliant LAN components.