

**Comments on Draft 3 ENERGY STAR® Program Requirements for Computer Servers  
Fujitsu Siemens Computers  
1/12/2008**

Page	Line	Requirement / Definition	Comment														
6	298-301	Q. Idle: An operational state in which the operating system and other software have completed loading and the Computer Server is capable of completing workload transactions, but no workload transactions are requested or performed by the system (i.e. the Computer Server is operational, but not processing any useful work).	Definition of "Idle" state should contain a maximum response time to a transaction request. Would it make sense to refer to the ACPI power state definitions for a clear definition of "Idle"?														
10	455	<p><b>Table 3: Base Idle Power Requirements</b></p> <table border="1"> <thead> <tr> <th>System Type</th> <th>Idle Power Limit</th> </tr> </thead> <tbody> <tr> <td>Single Installed Processor (1P – All systems)</td> <td>80 Watts</td> </tr> <tr> <td colspan="2"><b>Two or Three Installed Processors (2P &amp; 3P)</b></td> </tr> <tr> <td>Standard Availability Systems</td> <td>151 Watts</td> </tr> <tr> <td>High Availability, Low Installed Memory (&lt;16GB) Systems</td> <td>169 Watts</td> </tr> <tr> <td>High Availability, High Installed Memory (≥16GB) Systems</td> <td>221 Watts</td> </tr> <tr> <td>Four Installed Processors (4P)</td> <td>271 Watts</td> </tr> </tbody> </table>	System Type	Idle Power Limit	Single Installed Processor (1P – All systems)	80 Watts	<b>Two or Three Installed Processors (2P &amp; 3P)</b>		Standard Availability Systems	151 Watts	High Availability, Low Installed Memory (<16GB) Systems	169 Watts	High Availability, High Installed Memory (≥16GB) Systems	221 Watts	Four Installed Processors (4P)	271 Watts	<ul style="list-style-type: none"> <li>- We propose to use finer granularity regarding memory configurations</li> <li>- Differentiation between 2P and 4P servers regarding idle power consumption with only 1 installed CPU.</li> <li>- Include power allowances for RAID controllers (in table 4)</li> </ul> <p>We feel that the listed idle power requirements are more related to specific benchmark configurations. Real customer configurations (more memory, I/O controllers, HDDs) would most likely be excluded from getting an energy star label by this definition.</p>
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10	456	<p><b>Table 4: Additional Power Allowances for Extra Components</b></p> <table border="1"> <thead> <tr> <th>System Characteristic</th> <th>Additional Idle Power Allowance</th> </tr> </thead> <tbody> <tr> <td>Second Hard Drive</td> <td>15 Watts</td> </tr> <tr> <td>Additional Hard Drives Over Two</td> <td>8 Watts per Drive</td> </tr> <tr> <td>Additional Memory over 32 Gigabytes</td> <td>2 Watts / GB</td> </tr> </tbody> </table>	System Characteristic	Additional Idle Power Allowance	Second Hard Drive	15 Watts	Additional Hard Drives Over Two	8 Watts per Drive	Additional Memory over 32 Gigabytes	2 Watts / GB	Why are the allowed idle power values different for second and further additional hard drives?						
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Second Hard Drive	15 Watts																
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12	569	Input power measurements: +/-10% accuracy	We propose to require less accuracy in a PSU load range below 30%. Probably an accuracy table depending on PSU load would make sense.														

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12	573	Input air temperature measurements: +/- 2° C	We propose a tolerance of +/- 3° C
12	576-577	Data should be averaged on a rolling basis of 15, 30 and 60 seconds. All 577 three rolling averages shall be made available for collection.	We propose to have only one rolling average value based on 60 seconds
15	697-699	b. <b>Fan Power:</b> As indicated in the power supply test procedure referenced above, Multi-Output power supplies must be tested with internal fan power included in the measurement and efficiency calculation.	Why are power supply fans treated differently for single and multi output PSUs regarding power budgeting? FSC would prefer to exclude fans from power budget in multi output PSUs as well.
		General feedback	Is it really necessary to certify each and every server configuration for Energy Star? This will result in a huge administrative effort. We would propose to find a way to provide the Energy Star label on a system level, maybe including some information about min and max configurations.
		Attachment "Formatted Data Sheet_V7.xls":	Thermal information is not useful and should be excluded from the data sheet. Is it necessary to publish all results for the different configurations?