

ENERGY STAR Large Network Equipment Version 1.0 Specification Draft 1 Comments from the European Commission

Overall Comments

We are pleased to see the large network equipment specification being refined, and look forward to a discussion around qualification rates in the next draft.

Scope / Definitions

Line 8 onward – We suggest that a clarification is added the specification to state that should be categorised by the primary function of the device.

Line 35 – Definition of Security Appliance: We suggest that this definition be amended for clarity to specifically include devices with primary function is to provide virtual private network (VPN) services.

Line 46 to 51: Processor managed vs network managed products: We support the delineation of active state efficiency requirements on the basis of processor vs network managed capability, provided that test data shows sufficient differentiation between the two approaches.

Requirements

We strongly support the inclusion of the following requirements on both modular and fixed products:

- Power factor requirements in line with ENERGY STAR Version 2.0 Computer Servers and Version 1.0 Data Center Storage requirements.
- Power supply efficiency at 80Plus Gold PSU levels,
- An additional Power supply requirement of 80% efficiency at 10% load.
- Energy efficiency feature requirements (port power down, remote port admin, adaptive active cooling and energy efficiency Ethernet). Variable Speed Fans could also be included as there has been feedback that these are now becoming common but that an ENERGY STAR requirement could speed up the market penetration of this technology.
- Active state efficiency requirements and reporting

Whilst the area of large network equipment is complex and the equipment subject to wide variation in features/configuration and utilisation, we have confidence that the EPA can arrive at a satisfactory approach to address energy efficiency taking into account product performance without the need to overly categorise products. This approach has already been proven for product groups such as UPS and small network equipment, etc. A shift to a reporting approach, rather than inclusion of energy efficiency requirements would go against the principles of ENERGY STAR by failing to identify the best performing 25% of the market. Such an approach would not be supported by the European Commission. We therefore urge industry to work with the EPA toward performance-based energy efficiency requirements that are able to keep pace with technology development cycles at the same time as being technology neutral.

We support approaches that avoid the use of “adders” or “additional allowances”, and request that the EPA does not adopt such approaches unless there is very robust evidence (product performance data) provided by

industry in their support and it is possible to narrow the use of adders to few and very specific functionalities used broadly by the industry.

Reporting requirements

Line 350 – Data Reporting Requirements: We request that testing results for power factor and power supply efficiency at each loading point are also requested for reporting purposes, as this data needs to be measured for qualification anyway. We urge industry to work with EPA to provide good quality reporting data reflecting the energy efficiency of LNE in order that network managers can be better informed about the relative impacts of LNE (rather than just considering energy consumption as happens with current purchases). We also support measuring and reporting input power and inlet air temperature.

Test method

We encourage EPA to continue to work toward ways of defining configuration of modular systems for testing, and to better define how products should be categorised into high and low utilisation categories for testing purposes.

Line 107 (specification) – Pluggable modules: It is stated by the EPA in the comments on the test method that:

“DOE recognizes that the type of pluggable module used during testing affects a product’s power consumption and performance...the selection of pluggable modules is considered an issue of product configurability. Therefore, the determination of which pluggable modules are used will be handled by the specification document.”

However, the specification document does not currently appear to address this point.

Line 151 – Air Flow Management: We suggest that the statement “Any airflow directly surrounding the UUT during testing shall only be generated by fans or cooling devices that are standard components of the UUT.” is sufficiently clear and that the further clarification: “The use of external fans or cooling devices in a manner that is inconsistent with normal data center practices is prohibited” be removed to avoid any confusion.

PSU configuration: As variations in PSU configuration can impact product performance and test results, we suggest that appropriate selection be addressed in the test method – perhaps initially by at least gathering detailed data. In particular, for UUTs with multiple PSUs, the use profile of the additional PSUs will have an impact on the product performance (e.g. redundant vs additional capacity) – and therefore needs to be logged in some way.