



Breakout Session: General Requirements and Program Scope

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Goals for the Session



- Discuss how products not covered by Tier 1 might be addressed:
 - >4 Socket Servers,
 - Server Appliances,
 - Fully Fault Tolerant Servers
 - Multi-Node Servers
 - Others?
- Review Power Management techniques, identify new options that might be available
- Energy Efficient Ethernet

Tier 1 Recap:

Scope



- EPA's goal remains to allow the manufacturer community to qualify a diverse array of products that fit primary definition for Servers
- Intent is always to have widest reasonable/feasible product coverage
- Scope of Tier 1 limited for a variety of reasons:
 - >4 Socket Servers: Industry noted a higher expected configurability in this segment, not among the bulk of server shipments;
 - Server Appliances: Very specialized. Difficult to compare from product-to-product;
 - Fully Fault Tolerant Servers: Industry noted that these systems are highly-specialized have a comparatively small market share, and divergent reliability profile from other servers;
 - Multi-Node Servers: Identified as a niche product category and defined to delineate from blade servers.

Discussion:

Scope



- Is there new information (increased market share/interest, test procedure availability, comparable sets of products, market differentiation/energy savings potential) on any of these categories called out for review in the specification that supports further investigation by ENERGY STAR?
- EPA received an initial suggestion that the Tier 2 specification continue to focus on volume servers (1S, 2S, or 4S general purpose servers in rack, pedestal, blades, or chassis form factors). With the exception of addressing blade servers, this suggested scope is similar to the initial tier of the program, and includes the majority of products on the market.
 - Are there suggested areas of the market outside of this scope that have a critical mass of products to allow effective comparison, represent a large source of energy-saving opportunity, or otherwise present an opportunity for ENERGY STAR to differentiate the market?
- What is the relevance of servers described by the new definitions for *Resilient Servers* and *High Performance Computing Systems* to the overall scope of the ENERGY STAR Computer Servers program?

Recap of Tier 1: Power Management



- All Computer Servers must enable processor level power management to reduce power use of the processor during times of low utilization (e.g. Idle)
- Systems must be shipped with power management functionality enabled in the system BIOS, and/or a management controller or service processor.
- Systems shipping with a preinstalled supervisor system must have power management functionality enabled by default in the supervisor system.
- All installed processors must be able to reduce power consumption in times of low utilization (DVFS/Proc. reduced power states)

Discussion:

General Requirements



- Power Management: What are some of the key PM features being used today – and in the near future?
- Energy Efficient Ethernet:
 - What are expected challenges to implementation of compliant equipment?
 - Are vendors beginning marketing compliant components?