Google Comments on Draft 1 Version 1 Energy Star Storage Specification

May 21, 2010

Google has completed a basic review of this specification and appreciates this opportunity to provide comments for your consideration.

Obviously, this early draft leaves much open to further discussion. We have elected to comment on a few areas that we see as fundamental.

Definitions and Scope

We appreciate the difficulty and complexity of defining what equipment falls under the scope of a storage specification and what does not, and expect further discussion how how various types of storage devices may be included.

One area of concern is the disposition of database engines in such a specification. Database machines are certainly storage devices in a general sense, but they also provide other services. A database engine running a modern query language can run user programs of arbitrary complexity. Because of this, such a machine could be classified as storage, a server, or if software and hardware are supplied together, as an appliance. Google would like the EPA to consider all its hardware specifications (Computer, Server, Storage, etc) as a suite, and take care to make sure that there is always a single specification that applies to any particular piece of IT equipment.

PSU Efficiency and Power Factor Criteria

The current draft does has only place-holders for PSU efficiency or power factor criteria. Again, taking a holistic approach, the EPA should consider unifying the PSU requirements across all IT equipment with similar PSUs: computers, servers, storage, and perhaps one day networking hardware. We recommend adopting the CSCI Platinum specification for single-output power supplies, and the CSCI Gold specification for multi-output power supplies.

Power Management Requirements

We are happy to see placeholders for active and idle power, as well as power management. Research and comments will provide direction on what sorts of low-power modes are available and should be required for storage products. However, it is imperative that this specification include power management features, enabled by default, which automatically bring the system into a low-power state after a cessation of storage activity for a specified period, and from which the system can return to normal activity automatically upon receipt of an outside request.

Regards,
Google Green Operations Team