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Environmental Protection Agency (EPA)
Storage@energystar.gov

LSI Corporation ("LSI") is one of the largest suppliers of data storage equipment in the storage industry, providing RAID and disk shelves to multiple OEM's. LSI considers energy efficiency in data storage an important issue.

LSI provides the following general comments in response to the EPA's recent request to the storage industry for input regarding the draft ENERGY STAR Enterprise Storage Specification Framework issued June 4, 2009 ("Specification"). As the Specification is still in development, the following comments are preliminary. The enclosed LSI comments are only intended for Specification development purposes and are subject to change at any time.

- "Enterprise Storage" as used in the Specification may be too narrow of a term to accomplish energy efficiency in a broad range of products. The term "Data Storage" is generally understood to include a wider range of products, which may better support the goals of the Specification.
- LSI has been working with the [Storage Networking Industry Association](#) (SNIA) Green Storage Technical Working Group, and in general LSI accepts the positions and comments submitted by the SNIA in its recent response to the Specification..
- LSI recognizes the SNIA dictionary as a source for definitions of terms. Many terms in the Specification need to be defined in the SNIA dictionary.
- Developing a metric for measuring power in data storage equipment is a complicated proposal. Factors from raw capacity to usable capacity, reliability levels, protection levels, and many other factors make the establishment of a metric non-trivial. LSI is working to help define a standards-based metric generally accepted by the industry through its involvement with the [Storage Performance Council](#) (SPC), the [Standard Performance Evaluation Corporation](#) (SPEC), and the SNIA.
- LSI understands the need for a standard method to manage and monitor environmental states within a storage system. LSI considers the information in the Storage Management Interface – Specification (SMI-S) standard helpful. In many cases the SMI-S standard may already contain adequate profiles.

- The SNIA has developed a storage industry taxonomy generally accepted by LSI as defining data storage categories. The draft Specification may be too broad in its current state. LSI suggests consideration of the SNIA request to limit the scope to a subset of the taxonomy in further developing the Specification.
- An observation LSI makes regarding the SNIA taxonomy is the possible need to allow a different set of power supply efficiencies based on a particular category within the taxonomy. This consideration should be applied in further developing the Specification.

LSI thanks the EPA for the opportunity to provide comments during the development phase of the Specification. LSI looks forward to working with the EPA and the applicable storage industry groups and organizations in the development of metrics and testing approaches that meet the needs of all industry stakeholders.

Sincerely,
Engenio Storage Group
LSI Corporation

Mark Nossokoff
Strategic Planning
Mark.Nossokoff@LSI.com

Mohamad El-Batal
Storage Architecture
Mohamad.El-Batal@LSI.com

Hubbert Smith
Program Management
Hubbert.Smith@LSI.com

Tom Hammond-Doel
Alliances
Thomas.Hammond-Doel@LSI.com