

Comments on Draft 1 Version 2.0 ENERGY STAR External Power Supplies Specification

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Date:

November 16, 2007

Comments:

Target schedule 1st of July 2008 is challenging

- The final Version 2 criteria is not fixed yet, making it hard to be prepared by the proposed deadline.

- The lead time for new designs or even product updates can be over one year.

Statement of concern: "26% of currently listed EPS is fulfilling new limits"

- The active mode efficiency market analysis seems to be based on randomly measured sample when every sample or lot is unique.

- Taking into account individual component tolerances and total variation on product performance, this does not mean that 26% of found EPS would fulfill the new requirements through mass production.

- It is most likely that some of these would need redesign in order to comply with the new efficiency targets.

Efficiency improvement target 7-8% is very aggressive

- Hardware redesign is needed.

- The required cable thickness will increase the amount of copper, insulation and cable material are needed

- From the total life cycle point of view, the increase in amounts of materials and possible size increase would have an impact on the total energy consumption and global warming potential (CO₂ emissions) of the application and therefore could increase total environmental burden of the product.

0.3W No-load energy consumption target is quite loose

- The EU Code of Conduct (EU CoC) limit 0.3W has been de-facto standard already for long time and should be considered.

No-load and efficiency requirement should be more balanced based on application

- Saved energy depends on the end-product use-case and how active mode efficiency and no-load energy consumption targets are balanced.

- In battery-operated use cases, a major portion of lost energy comes from no-load.

- For example, consider a one charge/discharge cycle (with two days usage pattern). Energy needed for one charge is ~7Wh. The potential energy savings with 7% eff. increase is 0.49Wh. No-load energy for two days (0.3W) is 14.4Wh. Further no-load energy consumption decrease (from 0.3W to 0.2W) would save 10x more energy (4.8Wh) than proposed 7% efficiency increase during active mode (0.49Wh)

- 1-5W watt range could concentrate on no-load because use cases as major investments in active mode efficiency may not pay back efficiently.

Proposal

- Version 2 is applicable for new products launched after one year of specification freeze.

- Version 2 is applicable for existing compliant products (ES Class IV) after two years of specification freeze.

- No load consumption maximum 200 mW (1...5W EPS)

- Efficiency 3 % increase (1...5W EPS)