

**Energy Star External Power Supply**  
**Draft 1, Version 2.0**  
**Intel Comments**

Intel would like to offer the following comments on Draft 1, Version 2 of the Energy Star EPS specification

The new specification (like the older specification) defines the average of the efficiencies as being measured relative to the rated  $P_{out}$  (maximum rated power) at loads of 100%, 75%, 50% and 25%. We would like the average efficiency definition to match those used for internal desktop power supplies (average of 20%, 50% and 100%)

Table 1: It's not clear how the no-power overhead plays into the efficiency number in Table 1. It would be good to introduce the fact that the "real efficiency" needs to have the no-load wastage added to the "conversion efficiency". The 300mW no-load allowance for a 500mW charger either plays a huge role in the "average efficiency", or is not considered part of it at all. It's not clear which is the case. The role of the no-load allowance as a part of the definitions and the testing could be clearer.

For example, the following could be added:

Total power draw example: a 0.5W adapter must exhibit a conversion efficiency (see table 2) of 37%. In addition to the conversion efficiency, a static no-load consumption of 300mW is allowed (table 3). The maximum power consumption of such an adapter, providing 0.5W output would be  $0.5W/37\% + 300mW$ , or 1.65W. To evaluate compliance, the device must draw  $<1.65W$  averaged at power outputs of 500mW, 375mW, 250mW and 125mW.