

## **IBM Comments on the Energy Star Computer Draft 2**

Following are IBM comments on the Energy Star Program Requirements for Computers Draft 2 Version 4.0:

This is the same comment as made in draft 1, but the power supply internal fans should not be factored into the power supply efficiency. Fans are load at the output of the power supply, not conversion loss. This should be make clear in the specification.

The capability adders should be reviewed. The PCIe standard for WOL is 0.375 amps when enabled which translates into 1.24 watts at the load. Our suggestion is to raise the WOL from Sleep and/or Standby from 0.7 watts to 2 watts.

A capability adder is needed for workstations and servers with a service processor. The service processor allows for automated system discovery on the network via DHCP or SLP while in standby and sleep, remote power control, remote problem notification and diagnosis, simplified hardware service, as well as asset management and protection. The service processor has advantages over WOL and is a critical function in networked environments. The capability adder should be in the range of 22-30 watts.

Power supply efficiency and power factor should be looked at as one target and the design engineers should have the flexibility to balance marketplace needs and cost. If we use the 0.80 efficiency and 0.9 power factor, the target could be 0.72 ( $0.80 \times 0.9$ ) for 20%, 50%, and 100% load. The design engineer could make the trade-off between using active power factor correction to exceed the 0.9 and not be penalized for the efficiency loss through the power factor circuit.

Finally, comments on behalf of ITIC on timing, definitions, and levels, are supported by IBM.