

## Efficiency Challenge 2004: Judging Criteria Fact Sheet

The design competition features two major categories. The **Market Ready Category** covers internal and external designs that can cost-effectively save energy in particular types of consumer electronics products. The **Open Category** showcases the most efficient power supply designs from industry and academia without cost constraints. Below is an overview of the contest criteria and the judges' scoring process. Complete contest details can be found at <http://www.efficientpowersupplies.org/competition.html>.

### Market Ready Category

The Market Ready Category focused on packaging, price, efficiency of the power supply, and the overall product's efficiency.

Criteria	Percent of score	Notes
Active mode efficiency at 25%, 50%, 75%, and 100% of rated output power	40%	Measure in laboratory
No load (or low load) power consumption	20%	Measure in laboratory
Total cost of ownership (TCO)	15%	TCO is the purchase price of the unit plus the operational energy used by the product over the course of its lifetime; lower cost of ownership received a better score
System efficiency	12%	Efficiency of the power supply and the product it is intended to power; products that used less energy to perform a standard task (e.g., charging a battery, making a call, running a computer program) received a better score; score was given at judges' discretion based on measurements
Power factor correction (PFC)	8%	Measured in the laboratory; higher PFC resulted in a better score
Power density	5% of score	Power density is size of the power supply as compared to the power it is able to deliver to the product – the smaller the power supply, the greater the score

- The teams with the highest scores in each subclass were given subclass awards.
- Grand Champion was selected at the judges' discretion. This distinction was awarded to the product that had the best opportunity to succeed in the marketplace and ultimately result in significant energy savings.

### Open Category

The Open Category focused on unrestricted innovation coming out of industry and academia.

Criteria	Percent of score	Notes
Active mode efficiency at 25%, 50%, 75%, and 100% of rated output power	60%	Measured in laboratory; higher the efficiency, the better the score
No load power consumption	30%	Measured in laboratory; lower no load resulted in a better score
Power factor correction (PFC)	10%	Measured in laboratory; a higher PFC resulted in a better score

- The teams with the highest scores in each subclass were given subclass awards.
- Honorable mentions were determined at the judges' discretion, and were awarded to exemplary products that were particularly innovative, but fell slightly outside of subclass specifications or requirements for the competition.
- Grand Champion was selected at the judges' discretion. This distinction was awarded to the team that succeeded in tackling the most difficult technical challenge.