Power Supplies Q&A

Q. What is EPA announcing this week?

A. EPA's ENERGY STAR program this week is announcing a test procedure and draft efficiency specification for single voltage external ac-dc power supplies, commonly known as external power packs. The announcement will take place on February 23 at the Applied Power Electronics Conference and Exposition (APEC) in Anaheim, CA.

Q. What are power supplies, and why is EPA taking this action?

A. External power supplies convert ac power from the wall outlet into lower voltage dc power for use in cordless tools and telephones, cell phones, and many other consumer and office products.

EPA estimates that there are more than 3 billion units in use in the US and about 10 billion in use globally. These products are crucial to the operation of virtually all electrical devices, yet their energy efficiency can often be very low. In the US alone, it has been estimated that the total electricity flowing through power supplies is about 207 billion kWh/year, which is equal to about $17 billion/year, accounting for 6% of the national electric bill. EPA's research has indicated that approximately one-third of the electricity that flows through power supplies is consumed in the power supply itself. On average, these power supplies are only about 50 to 70% efficient, wasting 30 to 50% of the electricity flowing through them. Overall, 2 to 3% of US electricity could be saved through the use of more efficient power supplies.

EPA's ENERGY STAR program is taking this action to capture additional environmental benefits and energy efficiency in both active and standby power modes across the wide variety of consumer electronics and office equipment. ENERGY STAR has achieved significant pollution reduction through voluntary qualification and labeling of electronics and office equipment products, without including power supplies in our efficiency criteria. This added step to address power supplies will further strengthen ENERGY STAR and provide more efficient products to consumers.

Q. Are there international implications of EPA's announcement?

A. Yes. Since power supplies are shipped worldwide, EPA is collaborating with countries around the world, as well as domestic partners, to address efficiency issues. Countries involved in the collaboration include China, a global exporter of power supplies, through China's Certification Center for Energy Conservation Products (CECP), as well as ENERGY STAR partnering countries: Australia (National Appliance and Equipment Energy Efficiency Committee), Brazil (Eletrobras/Procel), and Canada (Office of Energy Efficiency, Natural Resources Canada). Through international coordination, ENERGY STAR hopes to expand the market for highly energy-efficient power supplies, and strengthen global efforts to reduce greenhouse gas emissions and improve air quality.

Q. How will EPA ensure consistency in energy efficiency, across a worldwide power supply market?

A. EPA has supported the development of a unified energy-efficiency test procedure, in consultation with our international partners. These unified testing procedures will ensure comparability of efficiency data, lower participation/compliance costs, and other positive benefits to industry participants and policy makers worldwide.

Q. Can you tell me more about the design competition?

A. EPA and the California Energy Commission will also jointly announce an international design competition for energy-efficient power supplies. The Power Sources Manufacturers Association (PSMA) has endorsed the competition as well, marking a unique collaborative effort by industry and government. The competition will run throughout calendar year 2004, with the winners announced at APEC 2005. This competition, coupled with the new specifications and testing procedures, is intended to create strong market incentives to enable the power supply industry to improve availability and the use of energy-efficient power supply options---thereby recognizing significant energy and environmental savings. EPA expects to see increased numbers of energy-efficient designs in the marketplace within the next few years.

Q. Where can I go for more information?

A. The draft specification will be available for review and comment via the ENERGY STAR Web site at www.energystar.gov/powersupplies beginning the week of February 23. Additional information on power supplies is posted on the Web site.