

Green Electronics

Environmental Benefits of 2007 EPEAT Purchasing

Information technology has enabled significant improvements in the standard of living of much of the developed world, and through its contributions to greater transport efficiency, improved design, reduced materials consumption and other shifts in current practices, may offer a key to long term sustainability. However, the production, purchase, use and disposal of electronic products such as personal computers and monitors also can have significant negative environmental impacts.

The EPEAT (Electronic Product Environmental Assessment Tool) system for greener electronics purchasing addresses many of these issues. This is the second annual report by the Green Electronics Council (GEC), which manages the EPEAT system, on the environmental benefits resulting from the purchase of electronic products registered and evaluated under the EPEAT program.

The EPEAT System

The Electronic Product Environmental Assessment Tool (EPEAT) program was launched in 2006 to help purchasers identify environmentally preferable electronic products – starting with a product standard and registry addressing personal computers and monitors.

The EPEAT environmental performance criteria and registry system were developed through a multi-year, multi-stakeholder process supported by US EPA that included participants from the public and private purchasing sectors, manufacturers, environmental advocates, recyclers, technology researchers and other interested parties.¹

The development of EPEAT was prompted by a growing demand for an easy-to-use evaluation tool that enables the comparison and selection of electronic products based on environmental performance attributes. IT purchasers needed a simple way to assess products' environmental impacts, and electronics manufacturers in turn wanted consistent guidance to ensure their green design efforts met with success in the marketplace.

EPEAT meets both constituencies' needs with a user-friendly system designed and guided by all stakeholders that is accessible to purchasers and manufacturers of any size. As a result, EPEAT has revolutionized the electronic product sector, with significant manufacturer and purchaser participation and an extensive registry of hundreds of electronic products that meet the system's demanding criteria.

The EPEAT system – 51 environmental performance criteria, a registry where products meeting those criteria are listed, and a verification system for vetting product declarations – offers purchasers an easy to use environmental screen for products based on a wide array of lifecycle impacts.

The system also provides manufacturers with guidelines for development of environmentally preferable products that will meet market demand. And it establishes competition among manufacturers to meet higher rating levels, which pushes innovation and environmental excellence forward.

Launched only 20 months ago, EPEAT has so effectively met the purchasing community's need for a tool to measure environmental performance in IT hardware that purchasers are adopting the tool in larger numbers every day. (See www.epeat.net/RFP.aspx for a sampling of purchasers using EPEAT.)

Through increasing purchase of EPEAT registered products, participating manufacturers are being directly rewarded for their environmental design and service efforts. And with more than 580 products currently registered by more than 25 manufacturers, EPEAT has grown to be the most comprehensive and effective environmental purchasing tool available for IT hardware. The rapid expansion of the EPEAT system is a clear indication of its value in the world of environmentally preferable purchasing.

Environmental Benefits of 2007 EPEAT Purchases

To enable purchasers to measure the benefits of their EPEAT purchasing vs. purchase of conventional products, US EPA supported the development of a lifecycle environmental benefits calculator by the University of Tennessee Center for Clean Products and Clean Technologies. The calculator assesses environmental benefits from electronic product purchases based on specific EPEAT criteria and tiers. By entering information provided by EPEAT's subscribing manufacturers on unit sales of registered products, it is possible to estimate the environmental benefits of overall EPEAT purchasing year by year.²

Sales of EPEAT-registered products worldwide in 2007 totaled more than 109 million individual units. Growth of EPEAT products' market share has been rapid – EPEAT registered desktop and laptop sales constituted more than 22 percent of total worldwide units shipped in 2007. The

lifecycle environmental benefit of those sales, compared to the purchase of conventional products is huge.

2007 purchases of EPEAT registered laptops, desktops, and monitors over conventional products will:

- Reduce use of primary materials by 75.5 million metric tons, equivalent to the weight of more than 585 million refrigerators
- Reduce use of toxic materials, including mercury, by 3,220 metric tons, equivalent to the weight of 1.6 million bricks
- Eliminate use of enough mercury to fill 482,381 household fever thermometers
- Avoid the disposal of 124,000 metric tons of hazardous waste, equivalent to the weight of 62 million bricks.

In addition, due to EPEAT's requirement that registered products meet ENERGY STAR's energy efficiency specifications, these products will consume less energy throughout their life, resulting in:

- Savings of 42.2 billion kWh of electricity – enough to power 3.7 million U.S. homes for a year
- Elimination of the release of 174 million metric tons of air emissions (including greenhouse gas emissions) and almost 365 thousand metric tons of water pollutant emissions

- Reduction of 3.31 million metric tons of carbon equivalent (MTCE) greenhouse gas emission – equivalent to removing over 2.6 million U.S. cars from the road for a year.

Remarkably, these benefits will not come at a cost premium – in fact, manufacturers and purchasers will actually save almost 4 billion dollars (US \$3,660,553,851) over the life of the EPEAT products sold in 2007, primarily from reductions in energy use.

The immense volume of EPEAT rated products sold worldwide in 2007, and the very significant environmental and financial benefits resulting, confirm the EPEAT system's success as a driver for environmental change in the electronic products market. Credit for these benefits goes to the many purchasers who are demanding EPEAT products, and to the manufacturers who are developing products and services to meet EPEAT's requirements and reduce environmental impact.

The Green Electronics Council anticipates robust continued growth in EPEAT product registrations and resulting benefits in coming years. As more products are designed to meet the current EPEAT standard, as standards covering additional electronic products come on line, as global use of EPEAT continues to grow, as purchasers world-wide buy more EPEAT registered products, and as the current EPEAT standard is revised to become increasingly stringent, these tangible benefits will continue to grow in scope and value.

For the full 2007 EPEAT Environmental Benefits Report, see <http://www.epeat.net/Docs/EnvironmentalBenefits2007.pdf>

¹ For a detailed overview of EPEAT's development, see http://www.zerowaste.org/epeat/epeat_development.htm

² As discussed in the body of this report, EPEAT is not the sole motivator of the environmental benefits reported here –in addition to some unique criteria of its own, the EPEAT system brings together into one unified tool such critically important criteria as ENERGY STAR and RoHS compliance, and attributes required under other major environmental evaluation programs.

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