



## HP Personal Systems Group – Designing for the Environment

HP has been a leader in environmental responsibility for decades. Our efforts to innovate and design for the environment represent a long-standing commitment, and a sincere belief that what is good for the planet is good for business. As the world's largest PC company, consumers and businesses around the globe purchase more than 48 million HP PCs each year, so we realize the potential impact HP, its products, customers and partners can have on the environment.

The HP Design for Environment program focuses on neutralizing this environmental impact in a variety of ways around the world. It includes three core areas of environmental responsibility: Energy Efficiency, Materials Innovation and Design for Recyclability.

### **Energy Efficiency**

*Reduce the Energy needed to manufacture and use HP products*

In January 2008, HP committed to reduce the energy consumption<sup>1</sup> of its volume desktop and notebook PC families by 25 percent by 2010<sup>2</sup>. Today, HP offers desktop PCs, workstations, notebooks, and monitors that qualify for key eco-labels around the globe, including the U.S. Environmental Protection Agency's (EPA) ENERGY STAR®, more than 50 products registered in the Electronic Products Environmental Assessment Tool (EPEAT), TCO development (Sweden), China's Energy Conservation Program, Japan's PC Green Label, Korea's Eco-label and Taiwan Green Mark. HP also supports the international standard EMCA 370 which outlines a common format for declaring product environmental attributes via The Eco Declaration (TED).

#### ***Energy Efficiency Facts:***

- HP PSG has the broadest selection of EPEAT Gold-listed desktops and notebooks with 17 products registered to date
- In 2007, the total energy consumption saved from the use of HP Power Management Technology may be as much as 3.5 million KG of carbon dioxide, or the equivalent of taking 76,000 cars from the road for one year
- HP Smart AC Adapters feature a built-in sensor that alerts the notebook when its power rating has been reached so the notebook can make power adjustments when necessary
- Ambient light sensors on certain notebook models dim panels in low light conditions to help reduce power consumption
- HP offers business customers a variety of energy-saving PC alternatives, such as thin clients and PC blades, which offering 50- to 80- percent savings in power compared to a traditional desktop
- HP Light Saver utility helps increase monitor life and save energy by allowing users to manage sleep modes and display on and off settings

### **Materials Innovation**

*Reduce the amount of materials used and develop materials that have less environmental impact and more value at end-of-life*

PSG designs products that use fewer materials, are easier to disassemble and allow for more effective reuse and recycling. HP engineers decrease the environmental impact of packaging by eliminating the use of heavy metals in packaging materials, maximizing the use of post-consumer recycled content and reducing the weight of materials, which also decreases fuel consumption in transport. HP has also committed to mercury-free LED displays and has set a goal to eliminate all remaining uses of brominated flame retardant (BFR) and polyvinyl chloride (PVC).

#### ***Materials Facts:***

- Making product documentation available digitally, instead of in the box, helps minimize paper use and reduces waste
- HP uses "molded pulp" in packaging that is completely recycled content from post-consumer and industrial-paper materials.
- PSG offers enterprise customers the option of having select desktop and notebook products bulk packaged to save packaging materials, weight and waste
- Thin Client packaging is one-third the weight of equivalent desktop packaging
- PSG has committed to using plastic pallets for consumer and commercial freight shipments, which reduce CO<sub>2</sub> reduction by reducing weight

### **Design for Recyclability**

*Design equipment that is easier to upgrade or recycle*

HP PC products are designed to make it easy for users to upgrade and extend the life of their product rather than replace it. HP also offers innovative reuse programs and products can eventually be recycled at the end of their useful life.

#### ***Reuse and Recycling Facts:***

- Notebooks with magnesium enclosures are easier to recycle than other systems
- Some HP notebooks use 100 percent post-consumer plastic in the speaker modules
- HP workstations are 90 percent recyclable by weight and designed with tool-less chassis for easy product recycling and upgrade at end-of-life
- Displays with reduced polymers and plastics are easier to recycle requiring less material sorting processes

**Supply Chain Social and Environmental Responsibility** is a fourth area of focus for HP's Personal Systems Group.

- HP's approach to implementing social and environmental responsibility in our supply chain is based on early, frequent and proactive involvement with key suppliers to develop a partnership for improvement.
- Our commitment is to protect worker rights, improve suppliers' working conditions and health and safety, and reduce suppliers' environmental impact. Our long-term commitment is to achieve sustained improvement by building our suppliers' social and environmental capability.
- HP was a leader in developing the IT industry Electronic Industry Code of Conduct (EICC), a first of its kind collaboration.
- In 2007, HP conducted 150 factory site audits and has conducted over 400 audits since program inception in 2004.
- HP announced in April 2008 that it was the first company to receive approval from the U.S. Environmental Protection Agency (EPA) to have the agency's SmartWay logo displayed on its consumer desktop and monitor packaging for moving to 100 percent SmartWay compliance carriers, a first in the EPA freight industry program aimed at reducing fuel consumption, greenhouse gases and other air emissions.

## Key HP milestones in Designing for the Environment:

- 1950: • Global Citizenship becomes a core company objective
- 1973: • Establishes environmental policy to continually monitor its operations to reduce pollution
- 1987: • Launches product recycling program
- 1988: • Hazardous Waste Minimization Council is formed to develop a corporate-wide strategy.
- 1991: • First HP environmental report published
- 1992: • Design for Environment product program launched
- 1992: • HP becomes one of the first U.S. Environmental Protection Agency's (EPA) ENERGY STAR partners
- 1994: • Publishes its first annual environmental report
- 1994: • Packaging management system is created, including guidelines to decrease the environmental impact of packaging
- 1997: • Opens its first recycling facility in Roseville, California becoming the only major computer manufacturer to operate its own recycling facility
- 2001: • Opens a second U.S. recycling facility in Nashville, Tennessee
- 2002: • Publishes its first combined Social and Environmental Responsibility Report
- 2002: • Supply Chain Code of Conduct released
- 2004: • Ranks 8th overall in the Accountability Rating, the first global index that evaluates how well the world's 100 largest companies account for their impacts on society and the environment; HP is the only U.S. company ranked in the top ten
- 2005: • Begins a free hardware recycling service in the European Union (EU) in advance of the EU Waste Electrical and Electronic Equipment (WEEE) Directive
- 2005: • Ships its first fully EU RoHS (Restriction of Hazardous Substances) compliant products
- 2006: • PVC eliminated in new consumer packaging designs
- 2006: • International climate change initiative launched with World Wildlife Fund
- 2006: • First major computer manufacturer to support the 80Plus Program, offering 80 percent efficient power supplies on business desktop PCs
- 2006: • Packaging innovations for consumer notebooks reduced the package size by 25 percent
- 2007: • First in the industry to introduce PCs to meet the more stringent hardware requirements of ENERGY STAR 4.0 with the HP Compaq dc5750 Business Desktop PC, four months prior to EPA effective date
- 2007: • Introduced first Electronics Product Environmental Assessment Tool (EPEAT) Gold product, the HP Compaq rp5700 Business Desktop PC, an easy-to-recycle PC that features a five-year lifecycle, 80 percent efficient power supply and components made from recycled plastics.
- 2007: • New consumer PC chassis design uses significantly less plastic and steel – saving enough metal over the next 18 months to build an Eiffel Tower
- 2007: • FOSE awards the HP Compaq dc5750 Business Desktop “Best in Show” award for PC category for energy efficiency
- 2007: • Introduced the HP Compaq dc7800 Ultra-Slim Business Desktop PC, which uses up to 39 percent less power on average than previous generation products with energy-efficient features such as 85 percent efficient power supplies, ENERGY STAR configurations and Verdiem SURVEYOR remote power management software
- 2007: • Polyvinyl Chloride (PVC) is removed from all HP packaging designs
- 2007: • Reached company goal of recycling 1 billion pounds of computer hardware and print supplies
- 2007: • Set new goals for end of 2010
  - Recover (reuse and recycle) 2 billion pounds (900,000 tons) of electronic products and supplies
  - Reduce the combined energy consumption of HP operations and products 20 percent below 2005 levels
  - Reduce energy consumption and the resulting carbon dioxide emissions from HP-owned and HP-leased facilities worldwide to 15 percent below 2006 levels
  - Eliminate all remaining uses of brominated flame retardant (BFR) and polyvinyl chloride (PVC) from new computing products launched in 2009
- 2008: • Introduces industry's first configurable ENERGY STAR 4.0 consumer desktop, the HP Pavilion a6360t, and the broadest selection of EPEAT Gold listed desktops and notebooks, at 10 products total
- 2008: • Sets goal to reduce energy consumption of HP's volume desktop and notebook portfolio by 25 percent below 2005 levels
- 2008: • First company to carry EPA SmartWay logo on product packaging

