

D e l l E n v i r o n m e n t a l U p d a t e 2 0 0 2 - 2 0 0 3



M O D E L F O R P R O G R E S S



Acknowledgement

We wish to acknowledge and thank Calvert Group, Inc. and As You Sow Foundation for providing input and guidance into Dell's environmental report update for 2002. While these groups have not endorsed the report, they are playing a key role as we work to improve the scope and depth of our environmental reporting.

For more information on environmental programs at Dell, please write to:

Dell Computer Corporation

One Dell Way

Round Rock, Texas 78682

U.S.A.

Attention: Worldwide Environmental Affairs

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Letter From the Chairman

In the nearly two decades since our beginning, Dell has achieved great success and leadership. Our unique direct business model has driven our accomplishments and helped sustain a sharp focus on the requirements of customers. Chief among these requirements is responsible stewardship of the land, air and water.

Dell is fully committed to products and practices that minimize risk to the environment, working to reduce—and eventually eliminate—environmentally sensitive substances and to keep materials out of landfills. From product concept and development through end-of-product-life practices and offerings, we strive to follow strict environmental standards, going beyond compliance with local laws and regulations where possible to meet and exceed the needs of our customers.

Dell's focus on integrating improved environmental performance into all aspects of our business is strong and driven in large part by our singular commitment to serve customers and to do what is right for them and the world we share.

While environmental improvements throughout our business have been continuous since our beginning, we have made particularly important strides in the past two years. A good example is Dell's recent introduction of a Restricted Materials program that identifies and bans from use in Dell™ products key materials and substances that threaten the environment. Another example is expanded and improved product recovery programs that maximize reuse and recycling and eliminate materials entering the waste stream. We also have continued to dramatically reduce the energy consumption of our products and to conserve natural resources throughout our global network.

At the same time, Dell has been aggressively working to anticipate emerging trends and requirements. In particular, we are preparing for compliance with important upcoming pan-European requirements such as the Waste Electrical and Electronic Equipment (WEEE) directive for product recovery and recycling. Also in Europe, we are closely following the development of the Restrictions on Hazardous Substances (RoHS) directive, as well as other proposed regulations.

Dell's success has been built on continually enhancing business efficiencies that enable our company to deliver greater innovation, affordability and convenience to businesses and consumers. The efficiencies that are good for our customers and for Dell also are inherently good for the environment. They minimize waste, conserve energy usage and reduce materials of concern at the source.

Details of these efficiencies and improvements are featured in this environmental progress update. While we take pride in these accomplishments, we remain committed in the months and years ahead to driving additional improvements, finding better ways to serve our customers, enhance efficiencies and protect our environment in the process.

Michael S. Dell
Chairman of the Board
Chief Executive Officer



Environmental stewardship is a top business priority at Dell, driving significant and continuing improvements throughout our value chain.



Overview of Progress: Made-to-Order for the Environment

Efficiencies, Customer Focus Drive Continuing Benefits for the Environment

One clear and consistent focus has driven Dell's rise and success in becoming the world's leading computer systems company: To meet and exceed the requirements of customers—large and small—across the world. Direct, one-on-one relationships with users are at the core of this focus, yielding the fullest knowledge of what customers want and need. Inherent in the direct model is a highly efficient build-to-order approach to manufacturing that creates products only as they are ordered by customers. As a result, inventories and waste are minimized, processes and procedures are simplified, resources are conserved and quality control is optimized. Most importantly, Dell's model achieves consistently high levels of customer satisfaction through custom-configured products that offer affordable acquisition and ownership, ease and convenience of use and unmatched service and support.

The same focus on business efficiencies and customer satisfaction helps drive Dell's environmental stewardship program to conserve product energy consumption, reduce or eliminate materials for disposal, prolong product length-of-life and provide effective and convenient equipment recovery solutions. By streamlining business steps and processes, Dell minimizes stress on the environment while achieving speed, responsiveness and cost savings that are passed along to customers.

The company's direct business model mitigates environmental impacts of resellers and enables the industry's lowest on-hand inventory, which reduces energy consumption for warehousing as well as transportation costs and emissions.

Managing for Advancement

Customers want and expect Dell to be a socially responsible leader and to provide products and services in ways that not only serve their personal or business interests, but also support the broader concerns of the community and the environment. Dell is committed to responding to these requirements through environmental programs that are integrated into the company's worldwide operations and supply chain.

Dell's far-reaching approach to environmental stewardship includes activities at every phase of its products' life cycle to lessen the environmental impact of equipment design, manufacturing, customer ownership and end-of-life management. Building on the improvements it has made in the past decade, the company continues to extend the scope and impact of its activities to comply with legal and customer requirements throughout its global operations.

Product Concept and Design — At the product concept and design phase, Dell's Design for Environment (DfE) program reduces the environmental impact of the company's products, focusing on the use of environmentally preferable materials in Dell™ equipment as well as reduction of energy required to operate products and systems. Innovations in product design specifications have significantly lowered the amount of energy required for desktop computers in recent years, while Dell portable computers have— from the onset—been designed for extremely low levels of energy consumption.

To address concerns surrounding the content of materials in computer equipment, Dell has introduced worldwide a robust Restricted Materials program that eliminates or heavily restricts the use of substances and compounds that pose concerns in design and manufacturing.

This year, the company initiated benchmarking and tracking to help ensure that its suppliers are meeting Dell's environmental materials requirements, which are based on regional laws as well as the wants and needs of customers. As part of its Restricted Materials program, Dell has formally banned from use in products and manufacturing more than 50 substances and compounds that pose concerns to the environment.

Manufacturing — Throughout the manufacturing and assembly phase, Dell operates its facilities to protect the environment while achieving process efficiencies that reduce waste and energy consumption and promote recycling and reuse. During 1999 to 2002, materials reduction, reuse and recycling initiatives in manufacturing operations diverted more than 80 percent of non-hazardous solid waste from landfills. In addition, most of Dell's manufacturing facilities are ISO 14001-certified.

Product End-of-Life — For product end-of-life management, Dell has rapidly expanded its program initiatives to include a broad range of safe and accessible alternatives to avoid disposal of equipment and materials in landfills. Programs include asset recovery, reselling and recycling. Whenever possible, equipment that is recovered is used to supply parts or for refurbishment and resale. For equipment with no remaining economic value, the company offers extensive and environmentally sound recycling processes to minimize burden on landfills. In the U.S., for example, equipment recovered by Dell for recycling undergoes a three-part crush and separation process, enabling metals, plastics and glass to be resold and reused in the raw materials supply chain. Materials are recycled by authorized third-parties, leaving negligible materials for landfills.

Environmental Management Team — To oversee and manage Dell's broad environmental programs, the company has recently formalized a cross-functional management review process to drive continued improvements. The Environmental Management Team is comprised of senior managers representing all areas of Dell's planning and operations. The team provides strategy, sets priorities and reviews programs to encourage innovation and to maximize support throughout the organization. (For expanded details on the Environmental Management Team and its interaction with other key functions at Dell, see page 22.)

Dell's environmental policy and growing number of environmental programs are founded on tenets of social responsibility and accountability. These priorities teamed with an unmatched focus on the customer and compelling business efficiencies offer strong benefits for the marketplace and for the environment.



Dell's vision is to create a company culture where environmental excellence is second nature. Our mission is to fully integrate environmental stewardship into the business of providing quality products, best-in-class services, and the best customer experience.

Dell's Environmental Policy

Achieving an Environmentally Focused Culture

Dell's vision is to create a company culture where environmental excellence is second nature. Our mission is to fully integrate environmental stewardship into the business of providing quality products, best-in-class services, and the best customer experience. The following environmental policy objectives have been established to achieve our vision and mission.

Comply With the Law

- Conduct business with integrity and dedicated observance of the environmental laws and regulations of the countries in which Dell does business, surpassing basic compliance whenever possible.

Prevent Waste and Pollution

- Operate facilities to minimize harmful impacts on the environment through environmental management systems that are integrated into Dell's business operations.
- Place a top priority on waste minimization, recycling and reuse programs, and pollution prevention.

Design Products With the Environment in Mind

- Design products with a focus on the entire life cycle, extending product life span, reducing energy consumption, avoiding hazardous materials and using parts that are capable of being recycled at the highest level.
- Set expectations of environmental excellence throughout Dell's vendor supply chain.

Continually Improve and Communicate Our Performance

- Collect and analyze information to measure and continually improve the company's environmental performance.
- Utilize the Internet to periodically update company progress to Dell neighbors and the general public.
- Foster a culture of environmental responsibility among employees.

Be a Responsible Neighbor

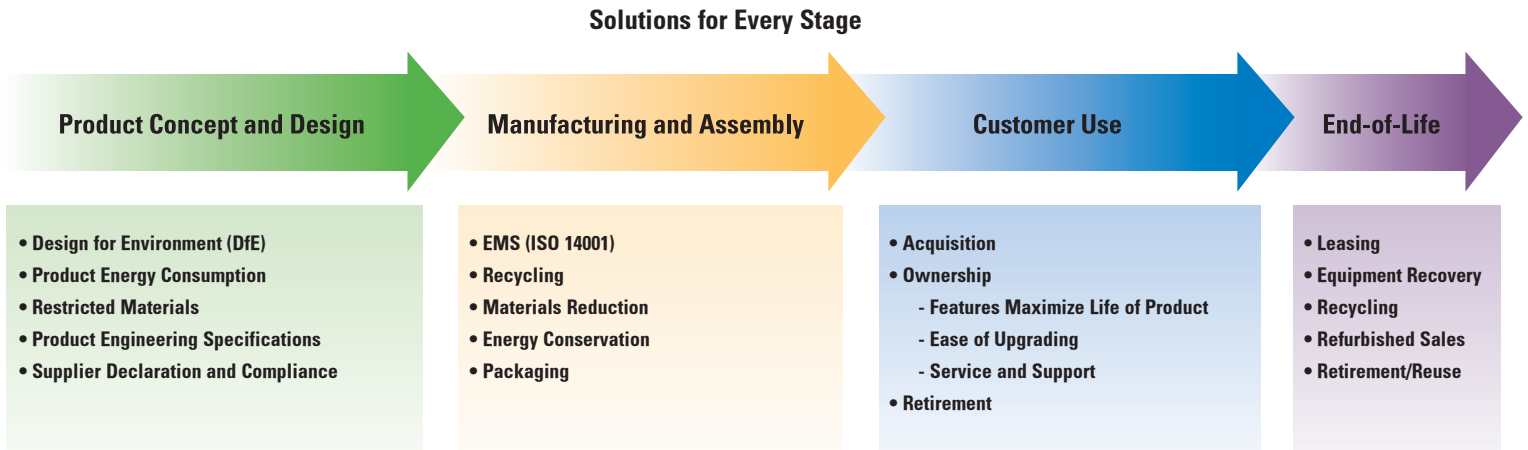
- Act in an environmentally responsible manner and, through established contingency plans, correct any actions that may harm the health and safety of the environment, Dell's neighbors or employees.



Dell has continued to advance its performance in reducing waste at its manufacturing facilities worldwide.

Managing the Stages of the Total Life Cycle

Dell's comprehensive approach to environmental stewardship targets improvements at every phase of product life cycle, from initial concept and design through manufacturing and end-of-life management and recovery solutions. The result is a highly focused and sustainable program that ensures that products, processes and resources are managed to minimize harm to the environment and to maximize conservation, reuse and recycling of materials wherever possible.



Stage 1: Product Concept and Design

Dell designs and engineers its products to prevent pollution and conserve natural resources throughout the system's life, achieving environmental responsiveness in tandem with sound business management. Reducing the environmental impact of Dell products begins at the design stage as cross-functional product design teams work to make thoughtful and effective decisions that will have positive environmental results throughout the equipment's life cycle.

Dell's Design for Environment (DfE) program incorporates into product development environmental attributes such as reduction of materials of concern, decreases in equipment energy consumption, extension of product life span and utilization of parts that can be reused, resold or recycled.

Complementing these attributes, Dell's DfE approach works to achieve higher product quality and longevity, improved customer satisfaction and innovations in materials management. Greater efficiencies in manufacturing and service along with reduced costs associated with asset recovery also result from this program.

Specific environmental improvement targets are incorporated into the development of Dell products, with recent design achievements including:

- Reduced product energy consumption, including the lowering of "sleep-state" energy required in Dell desktops from an average of 30 watts in 1999 to 3 watts in 2002.
- Establishment of a Restricted Materials program that helps to ensure that environmentally sensitive materials are eliminated or used only in limited quantities in situations for which no industry-acceptable alternative exists.
- Continued improvements in modular, upgradeable designs that facilitate servicing, extend the life of products and improve recyclability.

Product Energy Consumption

Reducing energy consumption of office equipment and products conserves natural resources, reduces pollution and saves costs. To decrease energy usage and lower overall costs to customers, Dell desktop and portable computers and monitors are designed to meet U.S. EPA ENERGY STAR® standards. These standards include stringent criteria for low-energy consumption during idle periods of computing, requiring a sleep mode that automatically shuts down when equipment is not in use. Dell has attained such energy efficiencies without compromising product performance and features.

Strong improvements in product energy consumption have been achieved even as processor speeds have increased exponentially in recent years. The company's products feature advanced power management, which conserves energy consumption by slowing microprocessors to use less energy during periods of inactivity. Advanced Configuration and Power Interface (ACPI) technology—an enhanced power management tool—assures that power is provided on an as-needed basis. Dell participated with primary ACPI developers Intel, Microsoft and Toshiba in the creation of specifications for this technology.

Restricting Materials of Concern

The use of materials that are environmentally sensitive is of growing concern to Dell, its customers and to the global community. Some materials—such as heavy metals, plastics containing halogens, and ozone-depleting substances—can pose potential environmental hazards if not handled properly during the manufacturing process or at end-of-life. To ensure that these threats are minimized, Dell has integrated into its product designs and supplier requirements a formalized program to reduce and minimize use of materials of concern.

While in certain applications there remains no industry-accepted alternative for some materials that pose environmental concerns, Dell strives to eliminate or reduce sensitive materials whenever possible. For example:

- Mercury is contained in the fluorescent bulbs of Liquid Crystal Displays (LCDs) as a source for screen backlighting to facilitate readability. Dell has banned mercury in all other applications in its product line.
- Lead has been banned from use in plastics, paints and product packaging. The metal is used on a limited basis for solder connections of printed circuit boards and components, and in leaded glass used in Cathode Ray Tube monitors to protect against radiation. Dell has a Lead-Free Core Team—comprised of functional leaders from throughout its worldwide operations—that is working toward a lead-free solution for Dell products in a timely manner. (More information on the lead-free initiative can be found on page 23.)
- Batteries are necessary in most computer products. Dell uses rechargeable lithium-ion or nickel metal hydride batteries whenever possible. Dell also uses lithium coin cell batteries. These battery types pose lower risks to the environment than batteries containing mercury, cadmium or lead.

Through its Restricted Materials program, Dell is actively working with its suppliers and partners—which manufacture many of the company's parts and products—to eliminate environmentally sensitive materials at the source. Because its suppliers contribute significantly to the environmental performance of Dell products, the company extends its environmental requirements to its major suppliers, holding these companies accountable for what they produce for Dell. (Specific materials restricted for use are listed in the appendix on page 26.)

The program manages supplier materials compliance using two approaches:

- Product engineering specifications
- Supplier declarations

One of the key drivers of Dell's Restricted Materials specifications is continued compliance with major European directives such as the anticipated pan-European implementation of the Restrictions On Hazardous Substances (RoHS) directive for electrical and electronic equipment. Other directives such as the new EU Chemical Policy also help drive Dell's materials planning and specifications. (See page 23 for additional information on how Dell is addressing RoHS requirements for lead-free products.)

Product Engineering Specifications — Dell products are designed with broad consideration of current and emerging legal requirements, as well as customer materials requirements. These laws, issues and concerns are continually analyzed and integrated into the company's Restricted Materials engineering specifications. While certain bans on materials are based on regional laws and concerns, materials requirements are implemented on a global basis.

Currently, more than 50 substances and compounds are restricted from use in Dell products and in the manufacturing of this equipment. Design teams use these specifications to communicate materials requirements to suppliers at the front-end of the design process and continually work to enforce the specifications.

Supplier Declarations — In addition to design specifications that restrict use of materials of concern in the product engineering stage, Dell is driving an initiative to audit supplier adherence to these requirements and to gather data on materials that may be restricted in the future. The Supplier Declaration program is being implemented among Dell's Tier 1 suppliers who are required to test and validate their compliance with the initiative through their sub-tier supply-chain.

The declaration program goes beyond substances that currently are restricted by Dell to include materials of potential concern to the company and its customers. Gathering this additional information allows Dell to proactively respond to upcoming restrictions and environmental concerns.

As part of the declaration process, Dell:

- Communicates its list of banned or restricted materials to suppliers.
- Requires vendors to comply with mandates for banned and restricted materials and to provide information on the use of materials that may be restricted in the future.
- Works with suppliers to take aggressive corrective measures in the event that restricted materials are found to be in use by their companies.

As the program rolls out among top-tier suppliers, Dell expects 100 percent adherence to its specifications.

Dell products have achieved key environmental certifications in Europe and in the United States. By participating in voluntary eco-label programs, the company continues to go well beyond basic compliance with environmental regulatory requirements to better meet the needs of its customers and the environment. In addition to participating in the voluntary eco-label programs, Dell looks to these programs as guidance for environmental practices and attributes for implementation across its product lines.



Blue Angel: Dell OptiPlex™ desktop computers have been granted Germany's Blue Angel eco-label, which certifies that products have undergone scrutiny to lessen stress on the environment. For computers, the eco-label is awarded to products that combine features promoting system longevity, recyclable design, ease of reuse and recycling, energy conservation, and avoidance of hazardous materials.

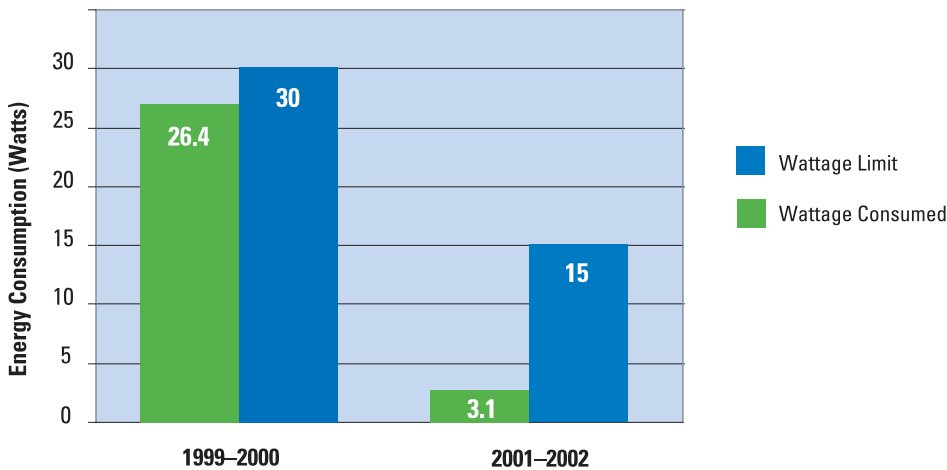


TCO: Dell OptiPlex desktop and Dell-branded monitors have been awarded the TCO '95/TCO '99 voluntary eco-label based on certification to standards developed by the Swedish Federation of Workers to improve and enhance work and external environments. Key criteria for the certification include acoustics, ergonomics, electrical safety and energy consumption.

Dimension™, OptiPlex™, and Dell Precision™

ENERGY STAR® Improvements

Dell Desktop Average



ENERGY STAR®: Dell-branded desktops, portables and monitors are designed to meet the ENERGY STAR energy efficiency standard. This program is a voluntary standard established by the United States Environmental Protection Agency (EPA). Through international agreements, the ENERGY STAR logo is becoming a global indicator of energy-efficient office equipment. As an ENERGY STAR Partner, Dell has worked closely with other industry leaders and the U.S. EPA to develop new ENERGY STAR computer specifications that will further improve energy efficiency for computer and monitor products.



Stage 2: Manufacturing and Assembly

EMS Drives Resource Conservation Across the Globe

Dell's commitment to the environment extends throughout its worldwide manufacturing and assembly facilities and offices. The company's Environmental Management System (EMS) follows the voluntary requirements of ISO 14001 as the internationally recognized standard for EMS. Dell sets aggressive environmental objectives and performance targets, managing each of its facilities to minimize waste and pollution and to conserve energy resources in compliance with the laws and regulations of local regions.

Currently, Dell has seven manufacturing sites around the world that are ISO 14001-certified. These sites are located in Limerick, Ireland; Penang, Malaysia; Xiamen, China; Austin, Texas; and Nashville, Tennessee. Dell's Sales Center in Kawasaki, Japan also is ISO 14001-certified.

Driving this initiative is Dell's commitment to fully integrate environmental performance into overall business and operational management, assuring that achievement of environmental goals is as important as reaching the company's goals for quality, marketing and overall financial strength.

Dell's direct business model yields strong production inventory and capital investment efficiencies that translate into tangible benefits for the environment. Since all products are made-to-order, Dell inventory turnover rate is the fastest in the industry, averaging four days for most parts and equipment. As a result, Dell is able to keep the environmental impact of warehousing to a minimum. Components and parts are not ordered and shipped to Dell until they are ready to be assembled into the final computer product, saving energy and building costs associated with storing inventory.

Manufacturing Waste Reduction and Recycling

Through the company's Reduce, Reuse and Recycle (R3) initiative, all Dell manufacturing facilities have permanent recycling operations that have resulted in significant waste reductions. These sites collect more than 10 different materials, including cardboard, office paper, plastics, metals, batteries, disks, aluminum cans, bottles and pallets.

From 1999 to 2002, this initiative has generated global recycling and reuse of 159,135 tons of material, diverting more than 80 percent of non-hazardous solid wastes from landfills. This figure represents a significant improvement when compared to Dell's 74.6 percent recycling-and-reuse rate in 1999.

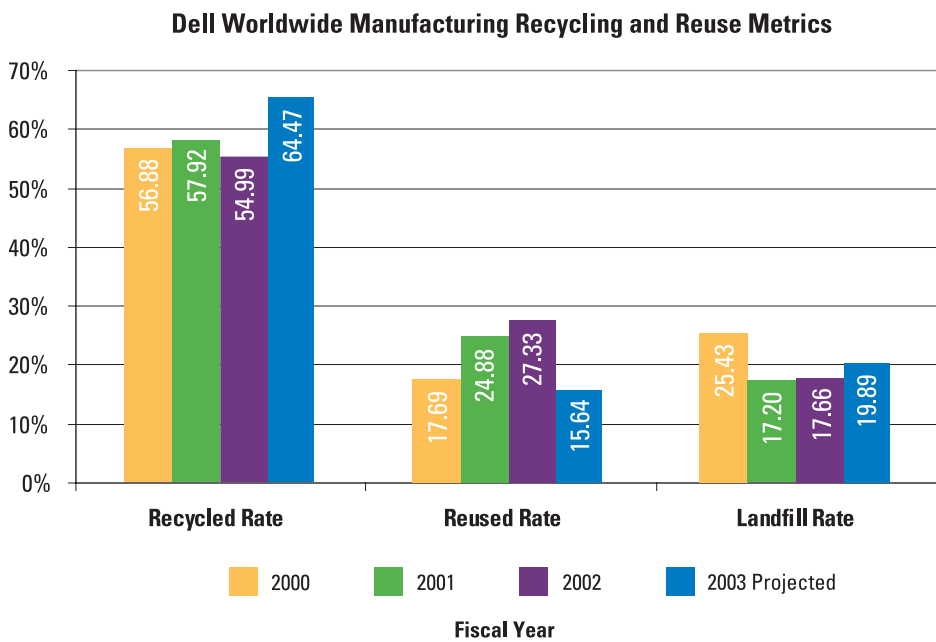
Dell has aggressively worked to systematically identify new opportunities for reducing waste and achieving related cost savings. Examples include:

- A closed-loop pallet program—in implementation at all of the company's Austin manufacturing sites—enables Dell to capture tens of thousands of pallets each month for immediate reuse or for repair and recycling by a local supplier partner.
- Through its new "Green Belt" project, Dell will be replacing most wood pallets with plastic units next year. With this program in place, the company will save an estimated \$405,000 each year in purchasing new wood pallets while reducing consumption of wood by 2,080 tons.
- Dell manufacturing buildings in Austin are saving approximately 60 tons of cardboard boxes and packing foam annually by reusing boxes for parts and components. The boxes are used to ship replacement parts to customers and service vendors throughout the United States. A business process improvement team is working on ways to increase this utilization in the coming years.

- In mid-2002, Dell began a program to use a highly durable and reusable plastic container for shipping components to selected manufacturing facilities from one of its manufacturing sites in Austin. After delivery and use, the containers are collected and transported back to the supplier for reuse. Approximately 15 tons of plastic containers are reused each month.

Using information gathered from successful R3 programs initiated in the United States, environmental and facilities managers from Austin are working closely with other Dell regions to find similar ways to reduce the company's solid waste stream worldwide.

Dell's R3 program has received recognition for its environmental excellence by local and state organizations including Keep Austin Beautiful, the Austin Corporate Recycling Council, the Recycling Coalition of Texas, and the Texas Natural Resource Conservation Commission.

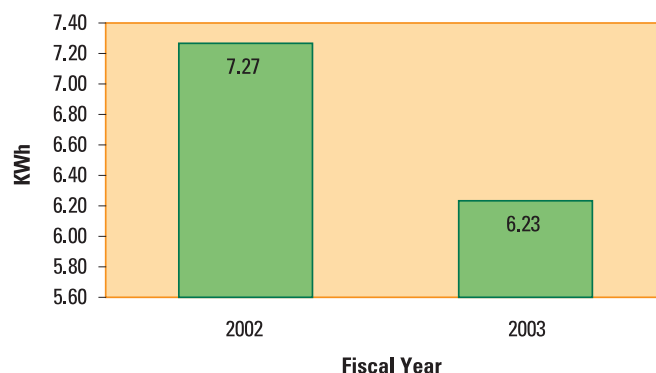


Energy and Emissions

Dell continues to find ways to reduce energy usage throughout its facilities worldwide and to achieve efficiencies that decrease emissions from transportation. The company's build-to-order manufacturing approach is an inherently clean and efficient process, and its assembly processes use only minor quantities of water while producing minimal air emissions. No chlorofluorocarbons (CFCs) or hydrochlorofluorocarbons (HCFCs) are used in the manufacturing and assembly processes.

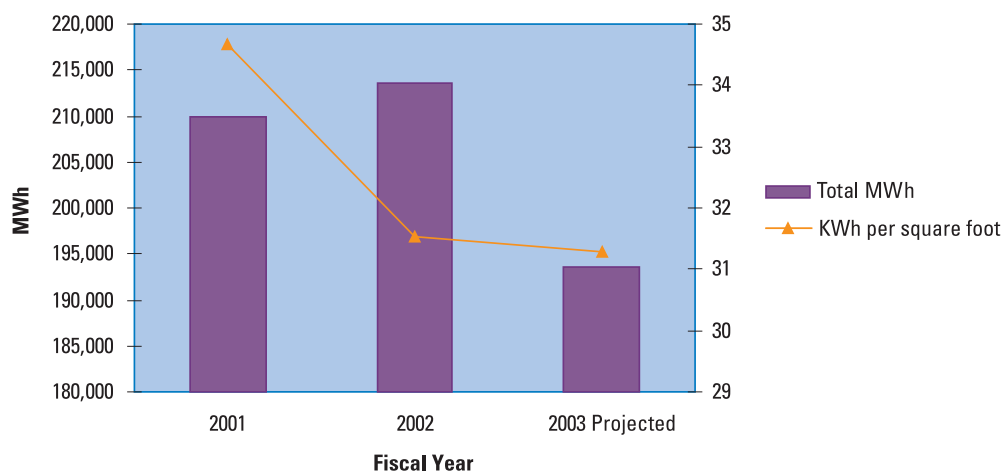
Because of energy-saving measures and efficiencies in Dell's build-to-order assembly process, average worldwide electricity consumption per-unit-produced has decreased by 14 percent from fiscal year (FY) 2002 to fiscal year 2003, or from 7.27 to 6.23 KWh per-unit-produced.

Dell Worldwide KWh Per Units Produced



In the U.S., Dell continues its efforts to reduce energy use in all facilities. As the total square feet of occupied area fluctuates, the KWh per square foot continues to decline. For example, from a rate of 34.7 KWh per square foot in fiscal year 2001, consumption is projected to be reduced by 9.8 percent in fiscal year 2003 to 31.3 KWh per square foot. Making full use of the automated building management systems in place, Dell has fine-tuned the performance of large air-conditioning equipment—such as chillers, cooling towers and DX units—resulting in the reduction of the total KWh consumption from 209.8 MWh in fiscal year 2001 to a projected 193.5 MWh for fiscal year 2003. This reduction of KWh consumption represents the reduction of carbon dioxide emissions by as much as 10,949 metric tons.

USA Total Electrical Consumption



Dell's manufacturing plant in Malaysia undertook an electrical energy-saving study in 2001. The study found that 60 percent of the energy consumed by the facility was related to air-conditioning to cool the production floor and administrative offices in this exceptionally hot and humid local climate. The facility took a multi-phased approach to conserve energy, including:

- Running air handling units (AHUs) at a higher chilled water temperature to lessen unnecessary dehumidification. Air moisturizers also were turned off.
- Operating a second chiller on a closely monitored, as-needed basis versus a fixed schedule. The unit now is automatically triggered by rises in chilled water temperature.
- Installation of industrial fans to provide additional movement of air that maintains comfort cooling when room temperature is raised to 22°–24° Celsius.

At Dell's European headquarters, the company is using extra insulation, low-power lighting and boilers to reduce energy. The company also is installing Intelligent Building Management Systems that learn building usage patterns to deliver energy only when needed. The supply, source and content of office equipment and materials are carefully investigated for energy efficiency, environmental soundness and recyclability. The buildings already have been given the Building Research Establishment Environmental Assessment Method (BREEAM) Award for their design and environmental friendliness.

Packaging

Computers and their components are sophisticated and precise products requiring maximum protection from dropping or vibrating the computer as well as temperature variations that can occur during shipping and handling. Dell packaging designers work to continuously reduce the amount and content of packaging material burden on customers and the environment without any sacrifice to product safety, reliability or quality.

Process efficiencies and concern for raw materials conservation and pollution prevention are at the core of Dell's environmental packaging practices. The company's programs in this area are focused on reducing volume of materials, improving recyclability and increasing use of post-consumer recycled materials. In turn, as packaging volume is reduced, shipping efficiencies are achieved, lowering emissions associated with transportation.

Portables Packaging — Redesigns in Dell portables packaging in 2002 will result in a 2–21 percent cube size reduction and include decreases in corrugated and foam materials. (Cube size varies depending on customer order.) These changes will save an estimated 500 tons of packaging materials annually.

Desktop Packaging — A recent redesign in Dell desktop packaging has resulted in a 21 percent reduction in cube size and an annual 3,000-ton decrease in weight of shipped corrugate and foam. As part of this redesign, Dell has switched thickness of its fabricated polyethylene foam from 2 inches to 1.5 inches.

Other Key Improvements — Dell packaging is free of heavy metals, halogenated polymers, and ozone-depleting substances. To facilitate recycling, Dell's goal is to have all packaging clearly marked with the recycling emblem and all plastics marked according to the standard DIN 6120 that graphically promotes recycling.

The company also minimizes paper shipped with each product by offering electronic access to system information and user documentation via the user's hard drive and the Internet. This ongoing effort substantially reduces the amount of paper stock Dell uses each year. All remaining paper documentation for computers sold in Europe and the Americas is printed on recycled-content chlorine-free paper.

The company is reviewing inbound component packaging to ship more product using less packaging. Changes in this area, for example, recently have enabled Dell to pack 33 percent more product into the same size box while reducing the volume and types of packaging materials.



Stage 3: Customer Ownership Experience

Dell's environmental solutions extend to solutions that simplify and add value to customer ownership, prolonging the life of computer systems and enhancing overall value and usage.

Acquisition

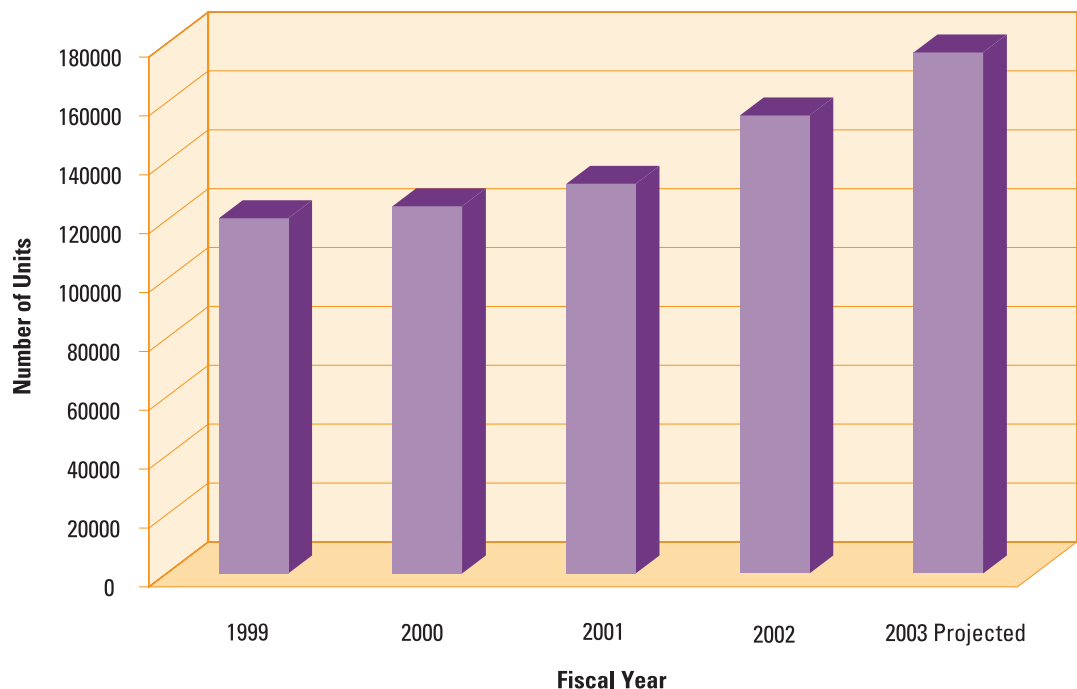
Dell offers its customers options in the acquisition of computer equipment that have significant environmental benefits. Corporate customers and consumers may choose to purchase used systems that have been refurbished by Dell for resale. In addition, through flexible leasing options, the company helps customers plan for and manage system obsolescence, including environmentally safe recovery and recycling services. In the U.S., for example, leased systems that require refreshing are either safely "ground down" according to EPA guidelines to re-enter the raw supply chain, or they are refurbished for resale or donation to non-profit organizations.

Ownership

Dell products are designed to offer the best experience for customers and to maximize satisfaction and the overall length of ownership. From the industry's best service and support to environmentally advanced products and features, Dell provides its customers with ownership benefits to optimize product usage and life span.

Eco-label certifications demonstrate the company's commitment to providing equipment that enhances visual ergonomics, as well as acoustic benefits. Reductions in product energy consumption help lower home and office energy costs for customers. In addition, Dell products are developed for easy and convenient upgrading to extend the life of the computer system and to scale to changing user needs. As customers need more memory or power, for example, the company makes it easy to install advanced features on their existing computer. Also, Dell monitors, keyboards and other components may be reused with other computers.

U.S. Asset Recovery Units Processed



Retirement

With a broad offering of equipment retirement options—from asset recovery to reuse and recycling—Dell continues its focus on providing customers with programs that make ownership easy and convenient. Because of its direct relationships with customers throughout equipment ownership, Dell is uniquely positioned to provide asset management services with options and services that customers find beneficial.

Stage 4: Equipment End-of-Life Strategies

Product end-of-life issues have posed strong concerns for Dell and its customers, driving the company's intense focus on providing solutions that are safe for the environment and offering ways to maximize the longevity of computers and their parts. While practices vary throughout the world to reflect customer, cultural and regulatory trends, Dell's broad strategies and programs for equipment recovery are among the industry's most aggressive and comprehensive in many of its regions. These programs—which continue to grow in scope and to evolve to meet demands—provide a full range of alternatives that minimize burden on landfills and extend the life of Dell products.

Recovering for Reuse and Recycling

For business customers, for example, Dell Financial Services (DFS) continues to provide asset recovery programs to ensure safe recycling of non-functional or obsolete computer technology. Since its beginnings, this business customer initiative has recovered more than 2 million computers for recycling or reuse in the United States. Additionally, DFS has bought back more than 300,000 computers, paying \$5 million in trade-in and buy-back fees to Dell business customers in the U.S. Some 250 companies currently participate in Dell recycling and trade-in/buy-back programs.

Annual asset recovery program volumes among business customers have increased from 118,000 units in fiscal year 1999 to 150,000 in fiscal year 2002, with units projected to be approximately 170,000 in fiscal year 2003. The business segment represents approximately two-thirds of Dell's customer base.

In Europe, Dell Financial Services has worked with more than 10 partners in collecting 57,000 used computers since 2000. The program currently includes nearly 400 customers in countries such as Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Ireland, Italy, Norway, Spain, Sweden, Switzerland, the Netherlands and the United Kingdom. Some 98 percent of all equipment returned has been resold to new customers, with all remaining returns broken down for either spare parts or recycling.

For consumers, the Dell Exchange program in the U.S. offers a variety of options for retirement or replacement of obsolete systems, as well as options for equipment recycling, trade-in and auctions. The initiative is expanding to include a recycling program that is free of charge for any desktop or portable computer, including keyboards, mice, monitors and printers. Documentation of EPA-compliant disposal is provided to customers upon request.

Through Dell Exchange, individuals also may donate used computers to non-profit or public agencies in their local area through the National Cristina Foundation. Since the foundation's beginning, hundreds of computers have been donated. More information about Dell Exchange can be found at:

http://www.dell.com/us/en/dhs/topics/segtopic_dell_exchange.htm

For recovered equipment with no economic value, Dell's authorized service supplier's recycling processes reclaim up to 99 percent of a desktop computer for other uses, which limits waste and reduces stress on the environment.

In the United States, Dell's recovery initiatives include one of the industry's most advanced and thorough recycling processes to enable safe recovery of materials, eliminating the need for disassembly and disposal at end-of-life. As products are recovered for recycling, they go to authorized facilities—compliant with EPA guidelines—that crush and separate equipment by weight. Crushing and separation are done in three phases to achieve very fine particles for metals, plastics and glass that subsequently are prepared to re-enter the raw supply chain. No hazardous materials are to go into landfills or other waste streams, and less than 1 percent of non-hazardous materials from computers enters the waste stream when processed through Dell's Asset Recovery Services. Guidelines for the company's recovery channels are included in the appendix on page 26.

Anticipating Future Requirements

As Dell implements its offering of end-of-life management solutions, the company also is actively engaged in preparing for anticipated directives such as the pan-European Waste Electrical and Electronic Equipment (WEEE) policy. The directive is expected to introduce a standardized producer-focused approach to collection, recovery and recycling of electrical and electronic waste among EU Member States by 2003.

Current End-of-Life Practices at Dell

Equipment Recovery — Product recovery programs are in place in key regions in which Dell operates, providing reuse, recycling and disposal to help protect the environment. The company works in close partnership with highly specialized third-party recyclers to provide the optimum recycling solutions to meet both legal and customer requirements in key regions.

When equipment still has useful life and market value, Dell reimburses owners for the current value of these products for recovery, refurbishing and resale. This practice provides a solution to help customers keep obsolete and unused equipment systems out of landfills and to ensure that disposal follows Dell's stringent environmental standards.

Dell began offering recovery programs to businesses in the United States in the early 1990s, and in 2002 the company has expanded its take-back efforts to include recycling for consumers.

In Europe, recycling and disposal programs are developing in tandem with emerging laws and regulations to meet evolving customer service requirements. Currently, the company implements recovery programs on a national level, but it is evaluating pan-European initiatives. Also in Europe, Dell participates in voluntary non-government recovery programs. In Taiwan, the company is involved in government-run fee-based programs for products sold in that market.

Leasing — Through Dell leasing programs, customers return and refresh their infrastructure. As part of this program, Dell re-markets many of these products to maximize their length of life and to minimize contributions to landfills. The U.S. EPA Waste Wise program has recognized leasing as an innovative way to reduce waste and extend producer responsibility.

Refurbished Sales and Auctions — For customers interested in refurbished systems, Dell offers previously owned computer systems online through its Dell Factory Outlet. Dell also was the first computer company to offer an Internet auction site for used equipment, an offering designed to make it easier to sell and extend the life of older systems.



As its recovery activities progress, Dell will continue to work with customers to monitor the effectiveness of these programs as a means of identifying additional areas of opportunity for the future.

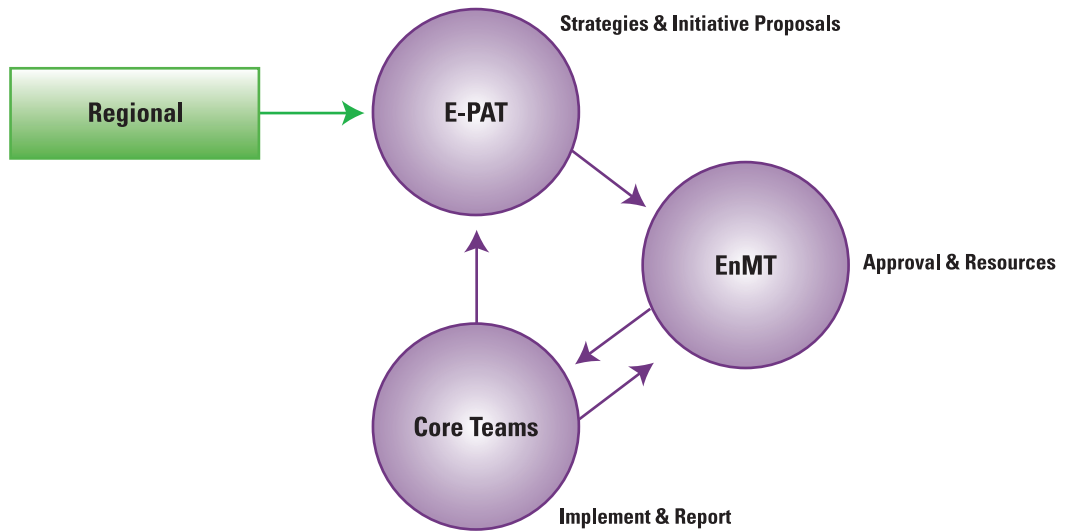
Good Business Is Good for the Environment

Dell has earned its reputation by finding new ways to leverage ideas, processes and relationships to bring innovations to its customers and the market place. The company applies the same approach to drive improvements for the environment, working to strengthen its stewardship performance and to create opportunities for significant progress at every level of its operations, as well as throughout the life cycle of its products.

As Dell expands and advances programs from product recovery activities to aggressive restrictions on materials of concern, the company will continue to leverage its business efficiencies and strength as industry leader to make powerful and far-reaching environmental differences that not only are good for business, but good for the broader world we share.

Dell's Environmental Management Team

The Environmental Management Team (EnMT) at Dell provides an oversight infrastructure made up of General Managers and Vice Presidents representing functional areas that are involved with aspects that may significantly impact the environment. The purpose of the EnMT is to review, approve and resource Dell's environmental initiatives, policy and underlying strategies. The EnMT works in conjunction with two other vital functions that provide balance to the overall EnMT infrastructure: the Environmental Policy Advisory Team (E-PAT) and the Core Teams.



There are two primary categories that encompass most of Dell's environmental initiatives. Activities either are associated with the products that Dell puts on the market and/or pertain to the many processes in Dell's business relationships.

The EnMT **Product Team** engages senior leaders of Dell's Lines of Business (LOBs). This group is represented by Product Development, Marketing, Worldwide Procurement, Legal and Environmental Affairs. The focus areas for this team come under the broader title of Design for Environment (DfE) activities and include (but are not limited to) management of environmentally sensitive materials, design of the product's energy consumption, ease of recycling and many other environmental attributes associated with Dell products.

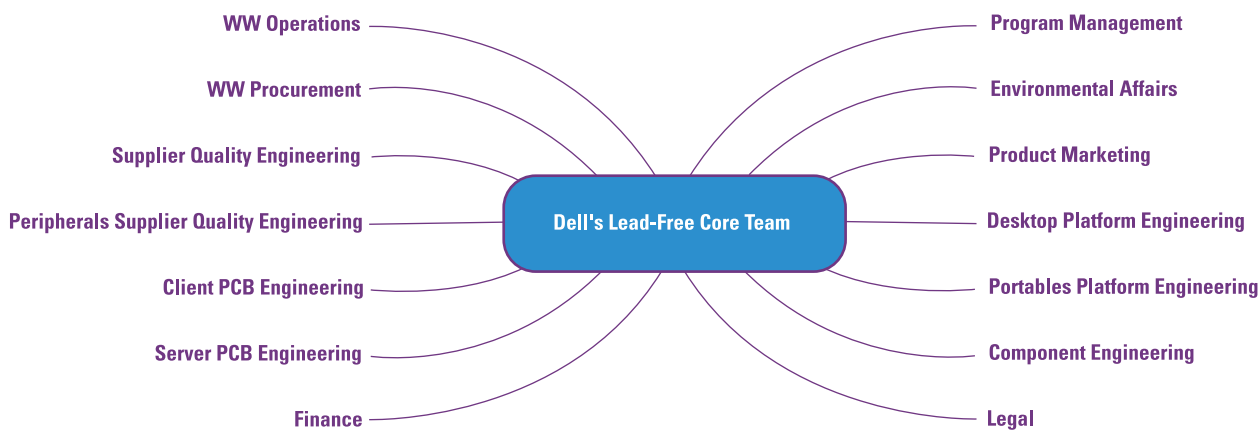
The EnMT **Process Team** includes a broader scope of executives at Dell such as senior managers from Service, Operations, Facilities, Government Relations, Legal, Public Relations, Investor Relations, Finance and Environmental Affairs. The primary functions that come into play in this group are Global Reporting, Environmental Management System (ISO 14001), Recovery/Recycling, Government Relations on legislative development, and Public Relations interaction with all stakeholders.

While the EnMT provides an executive level steering committee in a "top-down" fashion and ultimately is the decision-making body, the **Environmental Policy Advisory Team (E-PAT)** was created to provide the forward-looking capability to feed vital information into the EnMT on developing legislation and stakeholder expectations. This and other pre-screening activities help ensure that the EnMT is seeing only high priorities and facilitating optimal focus on resolving key issues with efficiency. The purpose is to create environmental policy and strategies for Dell, engage the EnMT executive teams for approvals and drive quarterly regional market and legal updates.

The environmental **Core Teams** at Dell play a vital role in bringing together the necessary subject matter experts from the above mentioned functions to develop and drive programs designed to manage key aspects impacting the environment.

EnMT In-Depth: Lead-Free Focus — The upcoming Restriction on Hazardous Substances (RoHS) directive from the European Union is a good example of how these teams come together to guide Dell's efforts to meet new requirements globally.

The following chart illustrates the number of functional organizations participating in driving toward a lead-free solution for Dell products.



Delivering lead-free alternatives is still a significant challenge for the entire electronics industry and involves a very complex set of relationship capabilities that have yet to be standardized. Therefore, any description of Dell's work in providing these solutions is preliminary and still-evolving by definition. The following list of deliverables for Dell's Lead-Free Solution Core Team demonstrates the significance of the company's engagement in this program's development:

- Surveying Dell's supply chain partners to understand their readiness to provide the necessary commodities and process controls that will allow Dell to execute a lead-free solution in a timely manner.
- Creating a Statement of Work that will describe the purpose of the team and the work deliverables to be produced, identify the correct functional members to be involved, time frames to delivery, and more.
- Developing roadmaps of each supplier's capability to respond.
- Providing a high level overview of the industry and the strategy for Dell's wide array of products to be released in different stages of lead-free product availability.
- Driving process changes that may be required by all players in the business relationship in providing a lead-free product alternative that performs as well or better than the previous leaded version of a product.

Dell's Position on Lead-Free Products — Dell is committed to finding appropriate and cost-effective ways to reduce lead in its products. To accomplish this, the company is engaged with its supply chain partners to implement the processes and technologies needed to migrate to lead-free products.

Technical Definition of Lead-Free — Electrical and electronic products and components are considered to be "lead-free" if they are assembled without the intentional use of lead (Pb) in the raw materials or the manufacturing or repair process. Even when lead (Pb) is not intentionally added to the product, it may exist as an impurity in the final end product. The established industry standard for an acceptable level of incidental lead (Pb) impurities for the electronic grade materials is 0.2 percent, and is described in the IPC J-STD-006 specification.

Source: HDPUG, December 2000

NOTE: Some electrical and electronic products and components may use raw materials or manufacturing processes where lead (Pb) is intentionally added (for example, some CRT terminals) to meet a basic function requirement of the part. These products may not be classified as "lead-free."

Recent Awards

BREEAM (Building Research Establishment Environmental Assessment Method) Award (Ireland)

2000 U.S. Conference of Mayors' Recycling at Work Award

2000 Keep America Beautiful National Award, Waste Minimization, 2nd Place

2000 National Recycling Coalition Tim McClure Award for Outstanding Environmental and Community Leadership (United States)



As part of its global industry leadership, Dell works to be environmentally conscious in providing products to its customers.

Appendix

Materials Restricted for Use

The following list of materials represents examples of substances that Dell has reduced or eliminated in certain applications.

Restricted Materials

Asbestos and its compounds
Cadmium and its compounds
Chlorofluorocarbons (CFCs)
Chloroparaffins, short-chained (10–13 carbon chain)
Chromium VI and its compounds
Halogenated plastics
Hydrochlorofluorocarbons (HCFCs)
Lead and its compounds
Mercury and its compounds
Nickel and its compounds
Polybrominated biphenyls (PBBs) and their ethers/oxides (PBDEs, PBBEs)
Polychlorinated biphenyls (PCBs) and terphenyls (PCTs)
Polyvinyl chloride (PVC)

Definitions (for purposes of these guidelines):

Recovery channel: The route of recovered products, parts and materials that begins with recovered products, parts and materials and ends at the parts' final disposition. The recovered products, parts or materials will either be resold (working or not), be recycled (in order to reclaim a metal, organic, or inorganic substance for further use), or be disposed of. Recovery channels do not include products and parts that are sold through typical Dell sales channels.

Recovered products, parts and materials: Sources include take-back, excess equipment, obsolete equipment, scrap, and so on.

Restricted products, parts and materials: Products, parts and materials that contain restricted materials, as defined by the local or national government, including lead, mercury and cadmium. Typical restricted parts include all batteries (particularly lead-acid or nickel-cadmium), glass from cathode ray tubes (lead), LCD fluorescent bulbs (mercury), and electronic components/cards (cadmium, lead).

Dell's Recovery Channels Guidelines

The following guidelines apply to all of Dell's recovery channels globally. The intent of these guidelines is to provide an infrastructure to appropriately manage recovered products, parts and materials collected both from customers as well as from Dell's service and manufacturing operations. It is the responsibility of all Dell employees to support and implement these guidelines.

Prevent Waste and Pollution — Recovered products, parts and materials are properly managed throughout the recovery channel.

- Prevent the shipping of products and parts containing restricted materials to solid waste (non-hazardous waste) landfills or incinerators, either directly or through intermediaries.
- Handlers of restricted products, parts and materials shall be participants in refurbishing, recycling or disposal operations that have a comprehensive Environmental Management System in place.
- The entire recovery channel, including intermediaries, shall meet all applicable environmental and health regulations.
- Dell will endeavor to maximize reuse, resell and recycling opportunities.
- Dell will endeavor to minimize disposal operations.

Be a Responsible Neighbor — Restricted materials are not exported to developing countries.

- Dell restricted products, parts, and materials shall not be exported from developed to developing countries either directly or through intermediaries, unless Dell Environmental Affairs has approved the recovery channel.

Continually Improve and Communicate Our Performance — Continually manage Dell recovery channels and communicate our performance.

- Dell will track, control and report products, parts and materials (particularly restricted materials) throughout the recovery channel. Tracking information should show the final disposition of all restricted materials.



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