Eco-Friendly Products

We are accelerating the development of Green Products and Super Green Products and are working to reduce environmental burdens throughout the product life cycle.

Green and Super Green Product Development

The Fujitsu Group has adopted a unified Group-wide approach to eco-design for newly designed products and works to improve environmental performance throughout the product life cycle. We have been implementing our own environmental assessments for products since 1993, and we strive to develop eco-friendly products that reflect environmental considerations in such areas as energy saving, 3R design,* non-use of hazardous chemical substances, packaging materials, and information disclosure.

Moreover, in 1998, to further strengthen development of eco-friendly products, we established Green Product Evaluation Standards and positioned the products that satisfy them as Green Products. Then, in fiscal 2004, we combined what had previously been two separate sets of regulations—for product environmental assessment and for Green Product evaluation—into a single set of standards with even higher levels of consideration for the environment. We called these Product Environmental Green Assessment Regulations, and they have helped to both strengthen our Green Product development efforts and make them more efficient.

Furthermore, since fiscal 2004, we have been working on what we call "Super Green Product" development for newly developed products. Super Green Products are those that meet the required conditions for Green Products and are also top class in terms of low energy consumption and/or 3R design technology, non-use of hazardous substances, packaging materials and use of eco-friendly materials and technologies. Super Green Products are products or systems recognized as having superior environmental characteristics to others we supply or are available on the market.

In fiscal 2009, we updated our list of certified Super Green Products, with items in 30 product families meeting our strict criteria. Since we began this scheme in fiscal 2007, the number of Super Green Products has steadily increased and for the updated 2009 total, 63% of our Green Products were also Super Green Products, meaning we had achieved the target set in Fujitsu Group Environmental Protection Program (Stage V).

At the beginning of fiscal 2010, we strengthened to a world-leading standard the requirements for a product to be recognized as Super Green in the categories for energy savings and resource savings, etc. Based on these significantly toughened standards, we established a new target in Fujitsu Group Environmental Protection Program (Stage VI) for at least 30% of our Green Products to also qualify as Super Green Products.

*** 3R design**
Design based on the principles of reduce, reuse and recycle

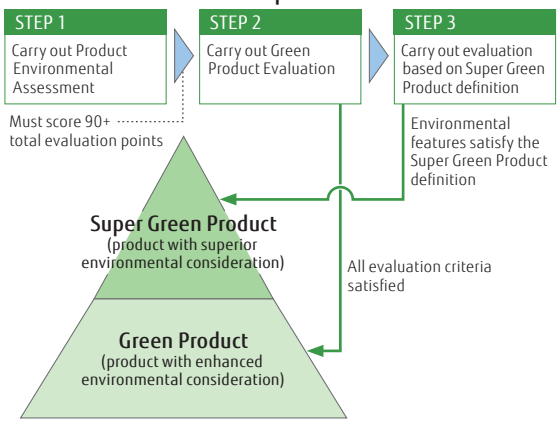
Carrying Out Life Cycle Assessment (LCA)

The Fujitsu Group has made it obligatory to perform LCA for all its green products. Calculation standards have been formulated for each product family, and the Group efficiently evaluates the environmental burdens of its products using its own database*.

Performing LCA makes it possible to determine which parts of a product's life cycle account for the greatest proportion of the environmental burden, so that environmentally-friendly products can be designed effectively. We also apply the expertise developed through our LCA activities to calculate the eco-efficiency factor, and are actively using this as a tool for communicating with our customers.

*** Our Own Database**
This is our own unique database of unit values, created by Fujitsu Laboratories based on input-output tables.

Mechanism for Green and Super Green Product Evaluation



Super Green Product Development Achievements (FY 2009)

Fujitsu Limited

- Server high-speed storage switch, SR-X526R1
- Secure switch, SR-S348TC1
- Optical access ring, FLASHWAVE 2735A1
- Wireless base-station equipment: RRE
- Global server, GS21 1600/GS21 1400
- Storage, ETERNUS DX60/DX80/DX90
- Notebook PCs: FMV LIFEBOOK T8190
- Desktop PCs: FMV-DESKPOWER CE/E50
- Display: VL-177SEL
- PC Servers: PRIMERGY CX1000 S1/CX120 S1
- Mission-critical IA server: PRIMEQUEST 1000 series
- Mobile phones: Raku-Raku Phones (F883iESS), etc.

Subsidiary companies and affiliates

- ATM FACT-V X100 (Fujitsu Frontech Ltd.)
- Thermal printers: FTP-62ADSL series (Fujitsu Component Ltd.)
- Connectors: (88 Type straight jack connectors) (Fujitsu Component Ltd.)
- Image scanner, fi-6800 (PFU Ltd.)
- Information KIOSK terminal (MEDIASTAFF SC mode I(PFU Ltd.)
- Power supply IC (MB39C316 (Fujitsu Semiconductor Technology Ltd., etc.)

Super Green Product Development Examples

Mission-Critical IA Server PRIMEQUEST 1800E

Energy savings
Reduces operating power consumption by 68% compared to a conventional model

3R design technology
Reduces product weight by 78%, volume by 86%

PC Server PRIMERGY CX1000 S1

3R design technology
Reduces product weight by about 40% compared to a conventional product with the same configuration

Secure Switch SR-S348TC1

Energy savings
Reduces operating power consumption by 27% compared to conventional models with the same functionality

Mainframe Global server (GS21 1600 / GS21 1400)

Energy savings
Reduces operating power consumption by about 20% compared to a conventional model

3R design technology
Uses a returnable box for product packaging

Notebook PC FMV-LIFEBOOK S8390

Energy savings
Achieves a ratio in excess of 1,000% relative to the target values in Japan's Energy Conservation Law (Model equipped with Intel Core 2 Duo)

High-Speed, Compact ATM FACT-V X100

Energy savings
Reduces power consumption by 40% in standby mode compared to a conventional model

3R design technology
Uses about 80% recycled materials for all the plastic parts of its case

Storage Disc Array ETERNUS DX90

Energy savings
Lowest operating power consumption (standard configuration) in its product class

3R design technology
The battery-free design eliminates the need for periodic battery changes

Chemicals
Lead-free printed circuit assembly

Desktop PC FMV-DESKPOWER F/E90D

Energy savings
Achieves an achievement ratio in excess of 1,000% relative to the target values in Japan's Energy Conservation Law

A3 High-Speed Image Scanner fi-6800

3R design technology
Leading product on the market in its product class for footprint and volume

WEB Table of Certified Super Green Products (in Japanese)
http://jp.fujitsu.com/solutions/eco/products/sgp/

Eco-Friendly Products

Disclosure of Environmental Information on Products

We actively disclose environmental information on our products, both via the Internet and in the form of environmental labels.

Since the end of fiscal 2006, we have registered notebook personal computers under the EPEAT*1 system, which encourages the purchase of green PCs and is used chiefly by US government bodies. Product environmental information for computers, magnetic disk devices, displays, printers, scanners, and mobile phones covered by green purchasing laws*2 is published on the Ministry of the Environment's website*3, while the equivalent information for computers, displays, printers and scanners conforming to the ENERGY STAR Program in Japan is published on the website of the Energy Conservation Center, Japan*4.

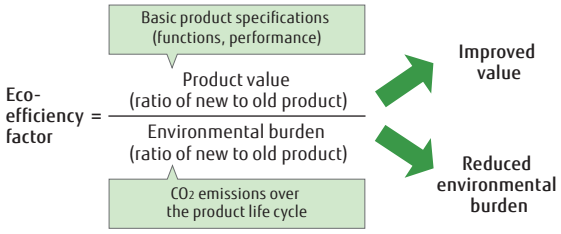
***1 EPEAT website**
http://www.epeat.net/
***2 Green purchasing laws**
Laws related to promoting the purchase of eco-friendly goods and products by the country or other parties.
***3 Ministry of the Environment website**
http://www.env.go.jp/en/laws/policy/green/index.html
***4 Energy Conservation Center, Japan website**
http://eccj06.eccj.or.jp/cgi-bin/enestar/pub_productsE.php

Reducing Product Environmental Burdens by Using the Environmental Efficiency Factor

In fiscal 2007, the Fujitsu Group introduced the eco-efficiency factor*, which evaluates both increases in product value and reductions in its environmental burden at the same time. The factor is calculated for newly developed Green Products in comparison with FY 2005 products. On average, the factor was 3.6 for the Fujitsu Group as a whole for products developed in FY 2009, which is substantially better than our FY 2009 target of 2.0, which we set in Fujitsu Group Environmental Protection Program (Stage V).

Moving on, we will continue to work toward the target set in Fujitsu Group Environmental Protection Program (Stage VI), of achieving a eco-efficiency factor of 2.5 by the end of FY 2012 compared to FY 2008 products.

*** Eco-efficiency factor**
A method for comparing old and new products that quantitatively grasps improvements in both product environmental burden and value (functionality and performance). This is an environmental index that promotes the creation of products that can provide even higher values at even lower environmental burden.



TOPICS

Making Visible How the Use of Eco-friendly Products Reduces Environmental Burdens

The Fujitsu Group is making visible the reductions in CO_2 emissions achieved through the use of our eco-friendly products and services by quantifying these reductions and then communicating this performance data to customers.

For example, since fiscal 2008 Fujitsu Business Systems Ltd. calculates for customers the data on emissions for before and after it implements a solution, and also the resultant yearly reduction in power costs. Also, it uses the 'cedar tree CO_2 conversion tool' to estimate a solution's environmental contribution as expressed as the number of cedar trees necessary to make an equivalent reduction in CO_2 emissions, and this service has proven very popular with customers.

Eco-friendly Product Example
Senshu University

SENSHU UNIVERSITY

A low power, low heat computer-system solution

In April 2010, Senshu University installed some 2,000 Fujitsu computers equipped with Windows® 7 as the computer system terminals to be used for its upcoming information processing courses and for research.

This is the first time an installation of this scale has taken place in a Japanese university for its computing classrooms using computers equipped with the Windows® 7 operating system (OS).

For this educational and research computer solution, we decided to use low power, low heat emitting servers and computers. About 1,600, or 80%, of the client PCs were LCD integrated models equipped with a power-saving CPU, the FMV-K5290. In addition, through the construction and installation of the PRIMERGY BX900 Blade Server, which has the lowest mounting space requirements in the industry, and also by creating a solution employing virtualization, we were able to realize substantial power and space savings. We continue to calculate the energy savings Senshu University is achieving through our solution, and four years after the installation we estimate it has contributed to a reduction in CO_2 emissions of as much as 975 tons (or 69,623 cedar trees), and reduced power costs by 27.45 million yen.

LCD-integrated PC FMV-K5290

Management of Restricted Chemical Substances in Products

The Fujitsu Group designates substances that are harmful to people and the environment and whose use is either prohibited or regulated by law as 'Fujitsu Group Specified Banned Substances.'

We provide products that do not contain such substances by strictly prohibiting their use in our products and by working to eliminate them through our green procurement programs.

We also recognize that minimizing the risks posed by certain chemicals is of the highest priority in ensuring our customers' safety. For this purpose, we designate substances suspected of being harmful (Substances of Concern) as 'Fujitsu Group Specified Controlled Substances,' even when their harmfulness has not yet been fully demonstrated.

Furthermore, in October 2009 we revised the Fujitsu Group Green Procurement Standards (please refer to page 73) and in line with these updated standards created the Fujitsu Group Specified Reportable Substances list. We place the highest importance on accident prevention for chemicals designated as specified control and reportable substances, and we control their amounts in a way that enables us to prohibit their use before they reach dangerous levels.

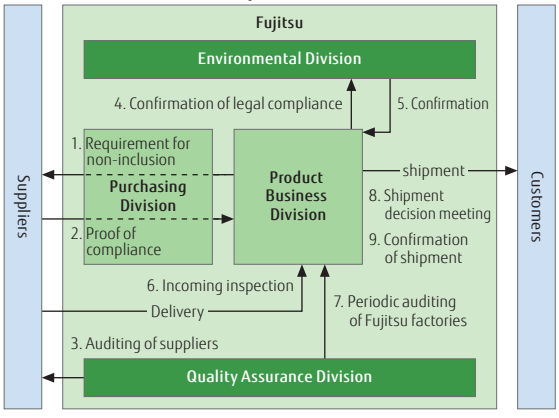
Our Approach to Preventing the Use of Forbidden Substances

The Fujitsu Group defines legally-regulated substances as 'Fujitsu Group Specified Banned Substances,' and provides products that do not contain them.

We have also established Fujitsu Group Green Procurement Standards and strengthen control of the chemicals in our products by requiring our suppliers to construct chemical management systems (CMS).

In response to regulations such as the RoHS*1 Directive, we have taken systematic action covering the entire supply chain by constructing a system headed by our product business division and including our quality assurance, purchasing, and environmental divisions, to manage chemical substances from design through to delivery.

Framework for RoHS Compliance



* Fujitsu Group companies are also constructing their own frameworks based on the above

***1 RoHS Directive**
Restriction of the use of certain hazardous substances in electrical and electric equipment

WEB **Fujitsu Group specified Banned substances**
http://www.fujitsu.com/global/about/environment/products/chemical/

Controlling Substances of Concern

The Fujitsu Group Specified Reportable Substances list includes substances that are REACH-regulation*2 candidate substances*3, and we collect information on substance amounts from suppliers and then manage these quantities on a per-product basis. Moreover, the Specified Controlled Substances list also includes data from suppliers on amounts for substances that may not be restricted by every country's regulations, but which we consider to be of concern.

As far as PVC is concerned, we not only control the amounts included in our products but also require in our Green Procurement Standards that it be used as little as possible, and restrict its use in everything except sheathing for cables and insulating materials for electronic components.

***2 REACH regulation**
Regulation concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals

***3 REACH candidate substances**
Selected chemical substances with properties (carcinogenicity, mutagenicity, reproductive toxicity, etc) regulated by REACH. If these substances are present in products, data on the amounts must be displayed.

WEB
- **Fujitsu Group Specified Reportable Substances**
  http://www.fujitsu.com/global/about/environment/products/chemical/
- **Fujitsu Group Specified Controlled Substances**
  http://www.fujitsu.com/global/about/environment/products/chemical/

We recognize that these are issues that occur across the entire supply chain and so we are actively participating in industry-wide efforts to deal with them, such as those by the Joint Article Management Promotion-consortium (JAMP) and the Japan Green Procurement Survey Standardization Initiative (JGPSSI). Moreover, we are currently investigating methods to more efficiently communicate information about these chemicals.

Using ICT to Control the Chemicals in Our Products

From requesting surveys by outside organizations through to gathering information by our own efforts, the Fujitsu Group maintains an integrated system for managing the information on the chemicals contained in the components and materials it purchases from its suppliers throughout its supply chain. Further, we use the large volumes of chemical-related data we collect to calculate amounts on a per-product basis, pinpointing the amounts of restricted chemicals at the product level and managing them accordingly.

The Group also offers an environmental business solution called PLEMIA/ECODUCE*, a software package that utilizes this in-house expertise.

WEB **The PLEMIA/ECODUCE website (in Japanese)**
http://jp.fujitsu.com/solutions/plm/pdm/plemia/option-04.html