Solutions that Benefit the Environment

By stepping up the certification of Environmentally Conscious Solutions, we are working globally to provide solutions that reduce the environmental burdens of our customers and society.

Basic Approach

To reduce the amount of greenhouse gas emissions on a global scale, efforts will be needed not only to reduce power consumption and to develop environmental technologies, but to profoundly alter the way people live and work. ICT is indispensable to achieving these innovations, and it will be critically important to take full advantage of such ICT in the future.

The Fujitsu Group sees ICT as the way to reduce environmental burdens (which we call "Green by ICT"). From this viewpoint, we are globally promoting the provision of leading-edge Green ICT to achieve the CO2 reduction targets in our Green ICT project, called Green Policy Innovation and will contribute to reducing the environmental burden of society as a whole.

Action Policy in FY 2011

Promoting Electricity Conservation and Energy Savings in Addition to CO2 Emissions Reductions

We believe that we must actively promote the reduction of environmental burdens by using ICT to achieve the CO2 reduction targets in our Green Policy Innovation initiative. In FY 2011, customer needs related to electricity conservation and energy savings mounted in the aftermath of the Great East Japan Earthquake. In response, Fujitsu launched a campaign to help customers reduce environmental impact by offering proposals for the use of ICT to conserve electricity and energy, in addition to reducing CO2 emissions.

Efforts in FY 2011

Increasing the Certification of Environmentally Conscious Solutions

Employing ICT solutions increases power consumption due to more servers and computers being used, but such solutions can also reduce the impact on the environment by eliminating paper use and reducing the movement of people and goods for more efficient use of office and warehouse space.

At the Fujitsu Group, we have assessed the quantitative reduction in environmental burdens (in terms of reduced CO2 emissions) from ICT adoption using an environmental impact assessment method developed by Fujitsu Laboratories Ltd., and we certify products and services that exceed the required standard as Environmentally Conscious Solutions.
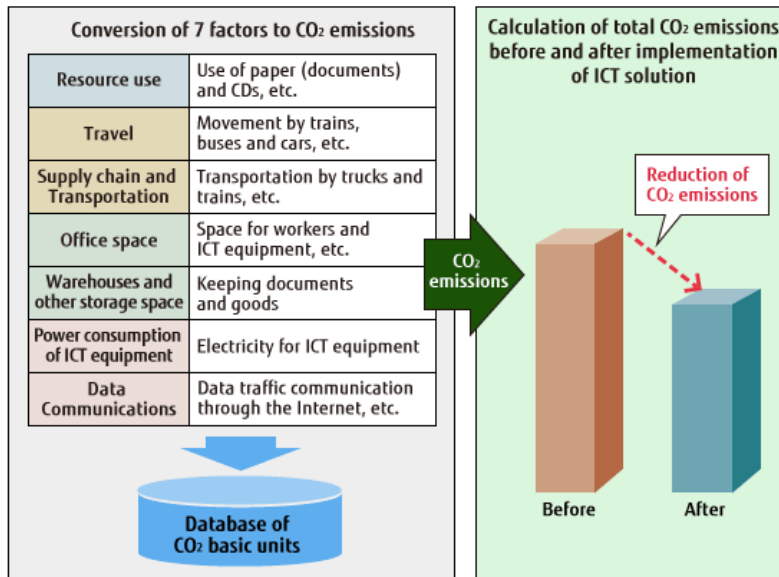
In FY 2011, we enhanced support for the Environmentally Conscious Solution application process, which resulted in 28 new solutions being certified, bringing the total to 258. In FY 2012, we intend to continue expanding the scope of certified products and services and will consider program revisions, such as establishing standards from perspectives other than just CO2 emissions reduction.

Environmental Impact Assessment Method

We analyze environmental impact reductions produced by ICT solutions by classifying the implementation effects into seven categories: resource use, travel, supply chain and transportation, office space, warehouse space and other storage space, power consumption of ICT equipment and data communications. The benefits are converted into CO2 emissions using CO2 basic units (CO2 conversion coefficient) developed by Fujitsu. CO2 emissions from before and after ICT solution implementation are calculated and compared, and reduction effects are evaluated accordingly.

This approach accords with assessment guidelines published by Japan's Ministry of Economy, Trade and Industry and Ministry of Internal Affairs and Communications, and with methods (L.1410) recommended in March 2012 by the International Telecommunication Union (ITU).

Overview of Environmental Evaluation Method

Conversion of 7 factors to CO₂ emissions	
Resource use	Use of paper (documents) and CDs, etc.
Travel	Movement by trains, buses and cars, etc.
Supply chain and Transportation	Transportation by trucks and trains, etc.
Office space	Space for workers and ICT equipment, etc.
Warehouses and other storage space	Keeping documents and goods
Power consumption of ICT equipment	Electricity for ICT equipment
Data Communications	Data traffic communication through the Internet, etc.

Database of CO₂ basic units

Calculation of total CO₂ emissions before and after implementation of ICT solution

Reduction of CO₂ emissions

CO₂ emissions

Before / After

- International Standardization of Methodology for Environmental Impact Assessment of ICT Goods, Networks and Services [Press Release]

Global Efforts

In order to globally promote solutions that contribute to reducing environmental burdens, in FY 2010 we launched the Environmentally Conscious Solutions certification system overseas as well. We have since completed informing overseas representatives about the assessment method and construction of the certification system itself. A remote medical system in Laos and other technologies have already been assessed under the system. Going forward, we intend to increase the number of solutions assessed and certified, and will strive for 100% coverage by the end of FY 2012 for targets under the Fujitsu Group Environmental Protection Program (Stage VI), in terms of both divisions and regions, in addition to domestic sites.

Promoting Visualization of Environmental Burden Reduction Effects from Customer ICT Utilization

In order to promote environmental impact reductions from ICT utilization, it is important that customers using ICT solutions understand how and how much they contribute to the environment. From this perspective, the Fujitsu Group makes it possible to see how ICT solutions reduce environmental impact and actively proposes this type of visibility to customers. In FY 2011, we worked to increase use of EcoCALC, a web tool for calculating environmental contributions, with a view to increasing solutions that make reduction benefits visible.

To help encourage use of the tool, we held over 40 operational presentations for sales reps and system engineers at nationwide sales branches beginning from October 2010. Over 1,500 people participated. Incorporating feedback from training participants, EcoCALC was fully updated in January 2012. The tool's specifications have been changed so that it can calculate not only CO2 emissions reductions but also energy savings and cost reductions, areas of considerable customer need.

EcoCALC updated in January 2012

Among activities to promote use, points are granted based on the number of proposals offered for making the benefits of environmental burden reduction more visible. Organizations acquiring the most points are recognized at company-wide events. As part of the Green IT Awards 2011 granted by Japan's Green IT Promotion Council in October 2011, Fujitsu received the Review Board Special Award for the development of its EcoCALC eco-contribution calculation web tool and company-wide activities aimed at achieving a more energy-efficient society.

Green IT Awards 2011 Logo

Awards ceremony

In January 2012, the scope of EcoCALC usage was expanded from the Fujitsu Group to business partners, making it possible for even more customers to visually confirm environmental burden reductions.

Going forward, we will promote horizontal dissemination of environmental solution examples and work to institute visibility for environmental burden reduction benefits in all Fujitsu solutions. We will also work to develop EcoCALC globally and make it possible for even more customers to visually track the effectiveness of their efforts to reduce environmental impact.

Case Study

Adoption of Virtualization Technology for More Efficient Operations and Reductions in Energy Consumption and CO2

Fujitsu and the National Hospital Organization Kure Medical Center have collaborated to completely upgrade the latter's medical information system to a highly secure, user-friendly thin client system using virtualization technology.

Medical record screen and web browser simultaneously displayed

With Kure Medical Center's previous medical information system, the hospital's electronic medical records (EMR) system and information system used to access the Internet (for a web browser, e-mail, and databases used in diagnosis and treatment) were each separately managed using independent networks for security reasons. The two systems could only be accessed using separate terminal, which caused operational efficiency to become an issue despite the vital importance of swift responsiveness in a medical setting. Moreover, in managing information for any of the medical departments, including the surgery department, data entered into the EMR system would need to be re-entered into the surgery department's administrative system, making administration duplicative and cumbersome. Consequently, in addition to workflow efficiency, preventing human error also emerged as an issue.

To meet these challenges, the partners set out to create a system design built on the installation of two virtualization servers-one for the EMR system, another for the information system-that enables screens from both servers to be simultaneously viewed from a single terminal. Now, through the use of a thin client system and a smart card-based single sign-on, Fujitsu and Kure Medical Center have built a secure, user-friendly medical information system. The new system enables users to securely access the Internet while simultaneously using the EMR system. The new system also has a built-in roaming function, allowing hospital personnel to call up their own files from any terminal in the hospital, thereby improving workflow efficiency.

Moreover, adoption of this system is also helping to mitigate environmental impact. Server consolidation through virtualization technology enables CO2 emissions to be reduced by 60% and, with the use of thin clients, CO2 emissions from terminals to be cut by 70%. The system has the potential to cut emissions by roughly 80%, resulting in a total projected reduction benefit of around 150 tons of CO2.

This example is just one way in which Fujitsu is leveraging ICT to support its customers' operations and help reduce their environmental burden.

Case Study

Internal Initiative Example: Saving Energy and Reducing CO2 by Replacing Hardware Products

Fujitsu's Social Infrastructure Business Unit II made proposals for saving energy and reducing CO2 by replacing hardware products in order to help customers reduce their environmental impact.

We first investigated the extent of reductions in power consumption and CO2 emissions that would occur by replacing the old Fujitsu devices with new Fujitsu models. The results were compiled into a customer proposal format, which made the solution easy to propose for the division's employees. We also calculated reductions in power consumption and CO2 emissions that would occur if the customer's entire system, including competitor devices, were replaced with the latest Fujitsu products, and conveyed the benefits of such upgrades. Moreover, we tabulated on a department by department basis the number of proposals clearly stating power and CO2 reductions or reduction rates resulting from ICT implementation. These figures served to stimulate awareness in the division with regard to increasing such proposals and helped revitalize the proposal process.

As a result of this initiative, the number of proposals promoting power and CO2 reduction benefits increased by roughly 120 times compared to FY 2010. We also successfully encouraged customers to reduce environmental impact through hardware upgrades.

This series of activities received the Special Environmental Award in FY 2011 at the Environmental Contribution Awards, an internal awards program. Division employees commented that the appeal of their proposals was enhanced by showing customers specific figures for energy savings, and that they learned how to engage in environmental activities while performing sales activities.
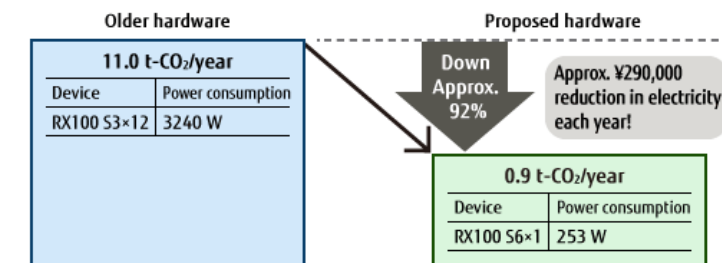
We intend to continue this initiative and further help customers reduce their environmental impact.

Example of a Proposal Utilized in In-house

CO₂ Reduction Effect Maximum CO₂ reduction effect of 92% with performance comparable to existing system.*
*Calculated on a comparison of hardware offering the same CPU performance as models available in 2005.

Older hardware

11.0 t-CO₂/year

Device	Power consumption
RX100 S3×12	3240 W

Down Approx. 92%

Proposed hardware

Approx. ¥290,000 reduction in electricity each year!

0.9 t-CO₂/year

Device	Power consumption
RX100 S6×1	253 W

Fujitsu Initiatives

Green Policy Innovation

- Cutting-edge semiconductor technology → Adoption/development of high-performance CPUs with low power consumption
- Ultra-fine mounting technology → Cable free thanks to high-speed signal wiring technology
- Meticulous cooling technology → Outstanding airflow design and sophisticated fan control

- Solutions that Benefit the Environment : Case Study Archives

Providing Environmental Solutions

We provide solutions that support implementing and improving environmental management so that our customers can achieve both business growth and reduced environmental burdens.

Basic Stance

In the context of increasingly severe environmental problems, our customers must promote environmental management that aims at achieving business growth and reductions in environmental burdens. Both are essential if they are to conduct sustainable business.

We at Fujitsu provide environmental solutions to support our customers' environmental management. We evaluate their environmental activities and "render visible" issues that must be improved in an integrated manner from a management standpoint. We propose measures that resolve environmental issues in a way that conforms to our customers' business strategies. Furthermore, our efforts are not limited to evaluating the current situation and proposing measures; we also support continuously increasing the level of our customers' environmental management by iterating the PDCA cycle.

In FY 2012, we began providing customers with the Environmental Management Dashboard, which realized peak power cuts of up to 41% for the Fujitsu Group in Japan in the summer of 2011. In addition to achieving peak power reduction targets, the Environmental Management Dashboard can also be regarded as a new management indicator for energy costs, and continues to assist customers in meeting their cost reduction targets.

- Environmental Management Dashboard
- Providing Environmental Solutions : Case Study Archives