Special Feature 1

The Fujitsu Group will Meet the Challenge of Creating a Prosperous, Low-Carbon Society.

Group Vision and Strategy for IT that Will Contribute to realize a Low-Carbon Society

Global warming is an increasingly severe problem, and countermeasures are now being sought at the global level.

In this situation, the Fujitsu Group sees its social responsibility as an IT enterprise in starting to tackle the problems of achieving a prosperous, low-carbon society.

Here we introduce the vision and strategy of the Fujitsu Group in seeking to contribute to realize a prosperous, low-carbon society.




Realizing a Low-carbon Society——The Role of the Fujitsu Group

As part of corporate citizenship befitting a global IT company, the Fujitsu Group will help create a prosperous, low-carbon society

First Commitment Period for Kyoto Protocol Commences

The Kyoto Protocol set the period from 2008 to 2012 as the first commitment period for advanced industrial nations, which must reduce their total greenhouse gas emissions by at least 5% compared to 1990. Signatories have specific reduction targets to meet this overarching goal. With the commitment period having started, questions are now being raised in every country about the effectiveness of emission-reduction initiatives. At the same time, there are calls for new global warming countermeasures aimed at realizing a low-carbon society; this, while as worldwide debate rages as to what new "post-Kyoto" framework will be devised to take up from where the Kyoto Protocol left off.

Preventing Global Warming Through Innovation

In considering future global warming countermeasures, the Fujitsu Group believes that innovation-based measures must be recognized as a necessary and integral complement to the largely "improvement-driven" measures pursued to date. The IT industry has a tremendous role to play in putting these innovation-based measures into practice.

To give an example, Japan's Ministry of Internal Affairs and Communications estimates that high IT utilization levels will effectively reduce Japan's CO_2 emissions by roughly 38 million tons in 2012. In other words, high-level IT utilization will enable CO_2 reductions in a host of different areas by making energy usage more efficient, reducing the physical movement of people and goods, and supporting more accurate measurement of environmental load and environmental forecasts. On the other hand, with the amount of electricity consumed by the use of IT devices growing each year, it is critically important to devise ways to reduce the environmental load caused by these devices.

Fujitsu's Role as a Global IT Company

In this context, we formulated "Green Policy 2020," a medium-term environmental vision that will see the Fujitsu Group do its part to make a prosperous society that generates low carbon emissions a reality. Designed to dovetail with the target being considered worldwide of reducing global greenhouse gas emissions to half of current levels by the year 2050, this vision will guide Group efforts to help emissions peak in 2020 as a necessary milestone in meeting this larger goal.

Fiscal 2007 also witnessed the launch of a new Fujitsu Group initiative called "Green Policy Innovation." By offering "Green IT" built on expertise and technologies from the Group's own environmental activities, this initiative will help to reduce the environmental load of our customers and society. Our minimum goal is to have the Fujitsu Group assist in reducing CO_2 emissions by a cumulative 7 million tons or more by fiscal 2010.

Along with more robust initiatives to further reduce the environmental load associated with its own activities, the Fujitsu Group will work together with customers to realize a prosperous society where low carbon emissions are the norm by merging expertise from our own environmental initiatives and powerful information technology to offer solutions for protecting the Earth and our natural environment.

President, Corporate Environmental Affairs Unit
Atsuhisa Takahashi

Seeing Beyond the Next Generation…

The Fujitsu Group's Medium-Term Environmental Vision: "Green Policy 2020"

The Background of the Medium-Term environmental Vision "Green Policy 2020".

The Japanese government's "Cool Earth 50" initiative published in May, 2007, which aims to establish a low-carbon society, calls for targeting a halving of the current levels of greenhouse gas emissions by 2050. Achieving this target will require the cooperation of the whole world.

However, the further economic development predicted primarily for the newly industrializing nations makes it extremely difficult to halve greenhouse gas emissions. To achieve this target will require innovative new technology, systematic reforms, and structural changes to markets, etc., and various innovations affecting society will be essential. It is in creating these innovations that the Fujitsu Group see IT playing a vital role.

For its own part, the Fujitsu Group has laid out a new medium-term environmental vision for dealing with global environmental issues in terms of the role the Group should play as a global IT leader and how it plans to carry out its role.

A Milestone on the Way to Halving Greenhouse Gas Emissions by 2050

Green Policy 2020, our medium-term environmental vision, targets the year 2020, pointing the way ahead for the role the Fujitsu Group must play over the next dozen years or so in moving towards resolution of the world's environmental issues.

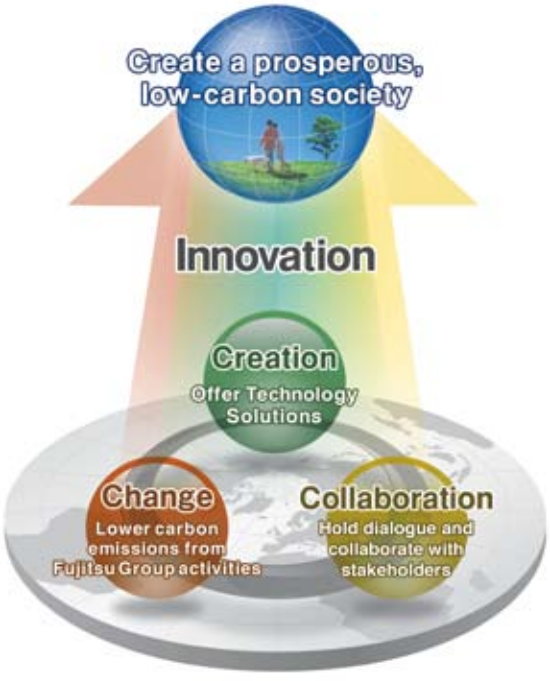
The Fujitsu Group sees 2020 as a milestone in progress towards the target, now under worldwide consideration, of halving current greenhouse gas emissions by 2050, seeing it as essential that such emissions should peak by 2020, i.e., should cease to increase and then go into decline, if the 2050 target is to be met. And the Group aims to contribute to this achievement.

Green Policy 2020: Medium-Term Environmental Vision

Green Policy 2020

The Fujitsu Group will meet the challenge of creating a prosperous, low-carbon society

To support the creation of a prosperous, low-carbon society, the Fujitsu Group will leverage its technologies and know-how to inspire environmental innovation for its business and for society, in collaboration with customers and partners.



The Concepts of Green Policy 2020

(1) The prosperous, low-carbon society that we aim to achieve will not only use little carbon, it will also take into account the contributions that biodiversity and a safe living environment make to well being.

(2) As well as reducing the environmental load that our own company imposes, the mainstays of our contributions to customers and society will be the reformation of the Fujitsu Group itself and the provision of information technology and the creation of IT solutions, contributing environmental innovations not confined to the Group but extending to the world beyond it. We will seek to maximize the volume of such contributions.

(3) We also aim to collaborate with our customers and partners, and indeed with all the various influential bodies that have a stake in international society, in making the industrial and other contributions needed for a low-carbon society.

The Image of the Prosperous, Low-Carbon Society that Fujitsu Seeks

Society as a whole, if it shares the common target of low carbon usage, will require all of its constituent bodies —government, enterprises, and citizens— to work together towards that target. And the application of IT, by bringing innovations to social systems, corporate activities, lifestyles, etc., in many areas of life, will achieve a society that combines prosperity with low carbon usage.

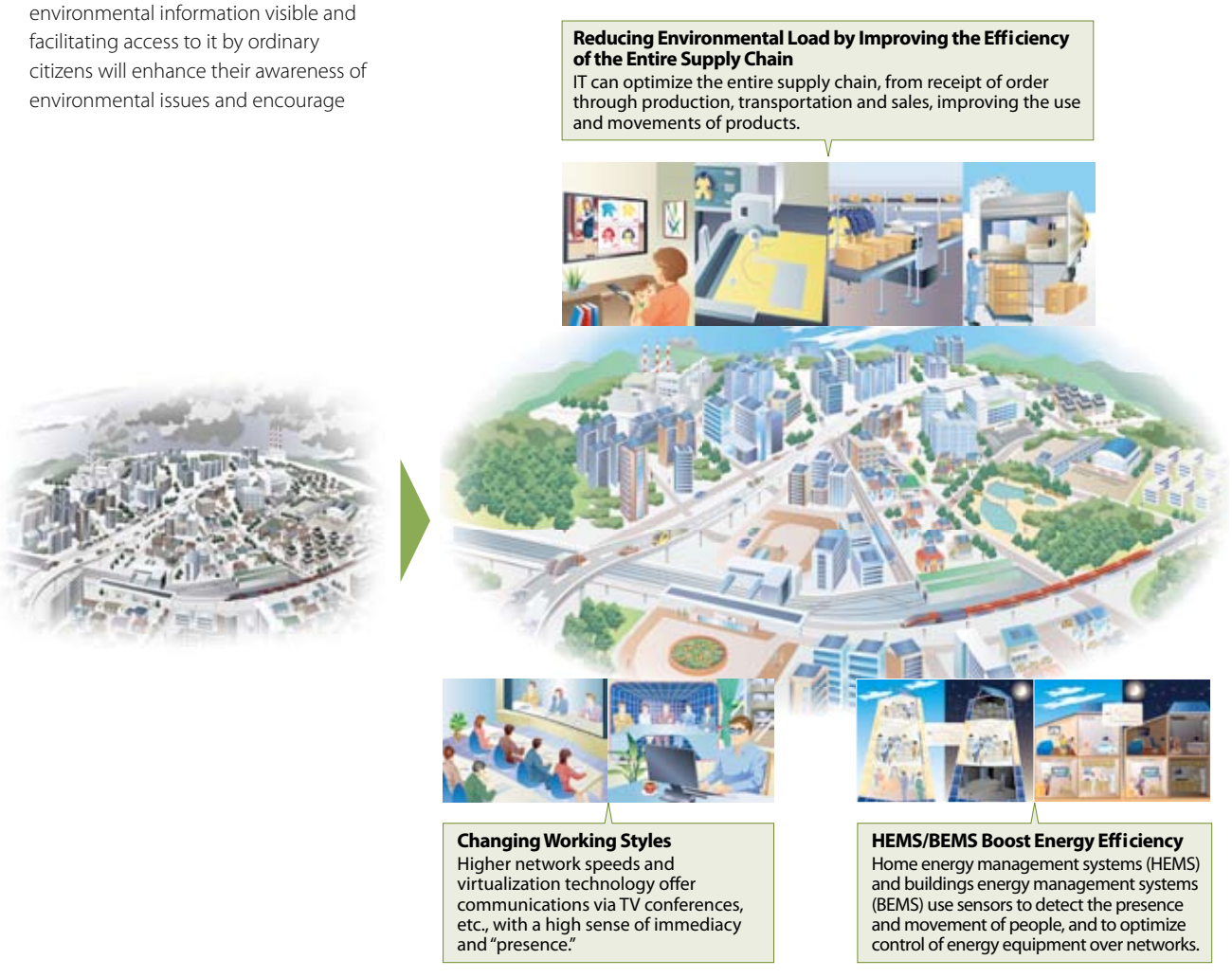
For example, innovative energy technologies will support the effective use of renewable energy, and the more efficient use of energy in buildings, homes, and in transportation, etc., and as their use spreads they will support the low-carbon society.

Also, rendering various kinds of environmental information visible and facilitating access to it by ordinary citizens will enhance their awareness of environmental issues and encourage them to select products and services that impose lower environmental load.

Then again, the adoption of advanced IT by enterprises will enable control of information on environmental performance throughout the entire supply chain, reducing the overall environmental load of their corporate activities and encouraging them to concentrate efforts on developing products and services that impose lower load.

What is more, by adopting a widening variety of working styles, including teleworking, the environmental load of moving people and things will be reduced and the ordinary citizen will be able to enjoy a lifestyle enriched by closer involvement with family and the local community and with more opportunities to come into contact with nature.

The IT support of society has been thoroughly greened. As well as developing and spreading the use of IT equipment that provides superior miniaturization, low energy consumption and recyclability, network integration is ensuring the most effective use of IT resources, lowering the load on the environment, and providing a wide range of increased values to society.



Reducing Environmental Load by Improving the Efficiency of the Entire Supply Chain
IT can optimize the entire supply chain, from receipt of order through production, transportation and sales, improving the use and movements of products.

Changing Working Styles
Higher network speeds and virtualization technology offer communications via TV conferences, etc., with a high sense of immediacy and "presence."

HEMS/BEMS Boost Energy Efficiency
Home energy management systems (HEMS) and buildings energy management systems (BEMS) use sensors to detect the presence and movement of people, and to optimize control of energy equipment over networks.

We will provide Green IT to support customers in reducing their environmental load.

Green Policy Innovation

Concentrating on Developing and Providing Green IT

With environmental issues like that of global warming becoming increasingly serious, all enterprises are being required to engage in stronger environmental management. This is making it even more important to ensure that in advancing measures to arrest global warming the power consumption of IT equipment should be reduced along with the environmental load imposed by the use of sophisticated IT.

The Fujitsu Group, deploying a total IT business ranging from PCs, servers and other IT equipment to complete IT solutions, recognizes one of its major responsibilities to society as the development and provision of Green IT that can contribute to the reduction of its customers' environmental load. It is therefore intensifying efforts in this approach.

Supporting Customers in Reducing Their Environmental Load

In December 2007, the Fujitsu Group announced its Green Policy Innovation project to support customers in reducing their environmental load.

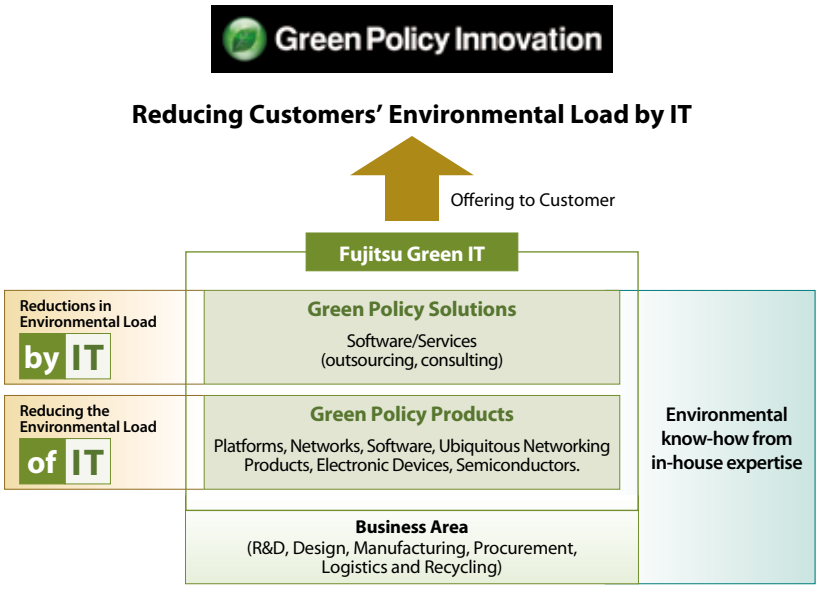
This project uses the environmental technology and know-how possessed by the Group to provide Green IT that reduces the environmental load imposed by customers and society, including the emission of CO_2. In promoting this project, the aim is to reduce CO_2 emissions by 7 million tons or more* over the four years from fiscal 2007 through fiscal 2010.

In the Fujitsu Group, environmental considerations are being strengthened at every stage of our business activities, from research and development, through design, manufacture, purchasing and distribution up to recycling when the product life cycle is over. Using the know-how acquired in these environmental activities, we will be working to develop and provide IT equipment and solutions that can contribute to lower environmental load.

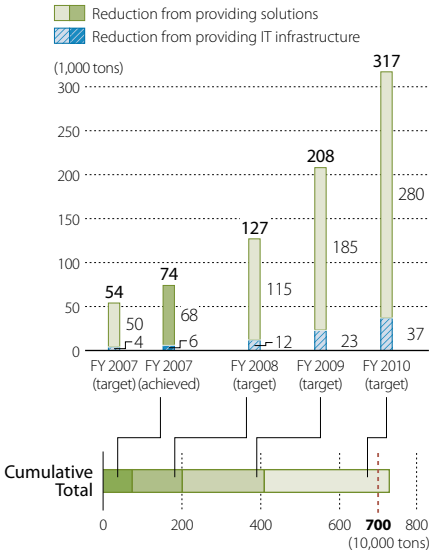
In fiscal 2007, reductions of 60,000 tons of CO_2 emissions were projected from the provision of IT infrastructure, and a further 680,000 tons from IT solutions. These targets were filled on schedule.

*** 7 Million Tons or More**
Estimated CO_2 emission reductions in Japan possible through application of proprietary methods from Fujitsu based on projected future sales levels of major platform products and specified Fujitsu products developed as environmentally friendly solutions.

Green Policy Innovation



Targets and Achievements in Reducing CO_2 Emissions by Green Policy Innovation



Reduction of at least **7m tons** over 4 years.

Examples of Green IT Provided by Green Policy Innovation

Reducing the Environmental Load of IT

Technologies to reduce power consumption, to miniaturize, and to save space, etc., use the latest advances to pursue reductions in power consumption and size in the IT products we provide.

Blade Server
(PRIMERGY BX620 S4)

- Saving space, cables
- Energy saving by server consolidation

CO_2 emissions reduced by 26%*1,2

Storage System
(ETERNUS2000)

- A super-green product with low energy consumption and fewer parts
- Eco-mode low-power consumption operation possible

CO_2 emissions reduced by 40%*1

Network Server
(IPCOM EX2000)

- A super-green product with low energy consumption
- Combined functions save space

CO_2 emissions reduced by 57%*1

UNIX Server
(SPARC Enterprise T5220)

- Low power consumption, saving space
- Features high-performance processor with low power consumption

CO_2 emissions reduced by 75%*1

*1 The figures are the effective reduction when in use (for one year) in comparison with the previous product.

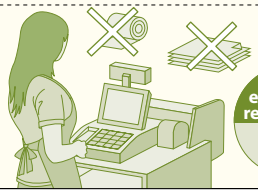
*2 A comparison of the power consumptions in use for systems with similar performance (10 rack servers and 10 server blades)

Reductions in Environmental Load by IT

Adopting IT solutions does not just make work procedures more efficient, it also reduces the movements of materials and people and makes more efficient use of office space, in this way contributing to the lowering of environmental load. By "visualization" of the effects of the IT solutions provided in reducing environmental load, using the methodology developed by Fujitsu Laboratories, Ltd., we can provide our customers with solutions that contribute to the environment.

POS System
(GlobalSTORE Ⅲ)

By concentrating the servers formerly distributed among multiple stores into a single server HQ and replacing the paper previously required for journal control by electronic media, energy is saved and paperless operation achieved.



CO_2 emissions reduced by 30%*

Intelligent Transport Systems (ITS)
In-Vehicle Digital Tachometer Stations

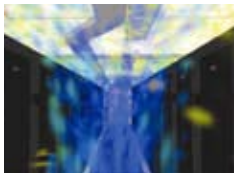
By rendering visible the data for speeds, distances, and times of delivery-vehicle operations, low consumption driving practices can be encouraged.

CO_2 emissions reduced by 19%*

* The figures are comparative reductions to the previous figures achieved in use (for one year).

Energy-Saving Data Centers

The increasing numbers and density of servers in data centers in recent years result in major increases in power consumption (and consequent heat generation), and more power is needed to operate the air-conditioning equipment to keep them cool. Fujitsu, based on knowhow acquired in actual operation of 50 data centers throughout Japan, provides "Green Infrastructure Solution" consulting services to support the design, configuration and operation of highly energy-efficient IT facilities.



Fluid flow simulation

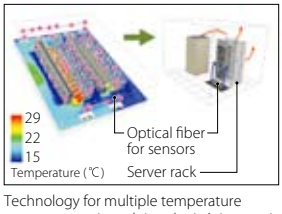
Applying the latest technology, including fluid simulation, the optimum arrangement of air-conditioning equipment and servers can be implemented to make energy-saving data centers and machine rooms.

Terminal Technology

Developing the Technology to Monitor Multiple Temperatures in Real Time

Fujitsu Laboratories, Ltd., has developed a new technology, based on optical fibers, that enables accurate and real-time temperature distribution measurement in large datacenters which have multiple heat sources.

Through a single optical fiber, this technology makes it possible to measure simultaneously the temperature of over 10,000 areas in a facility, thereby enabling visibility of temperature distribution in large datacenters. Combining this technology with an air-conditioning control system will enable fine-tune air conditioning, allowing for more energy-efficient large-scale data centers.



Technology for multiple temperature measurement in real time (artist's impression)