

# Global Warming Countermeasures

We engage in global warming prevention activities through three approaches that take the entire business life cycle into consideration.

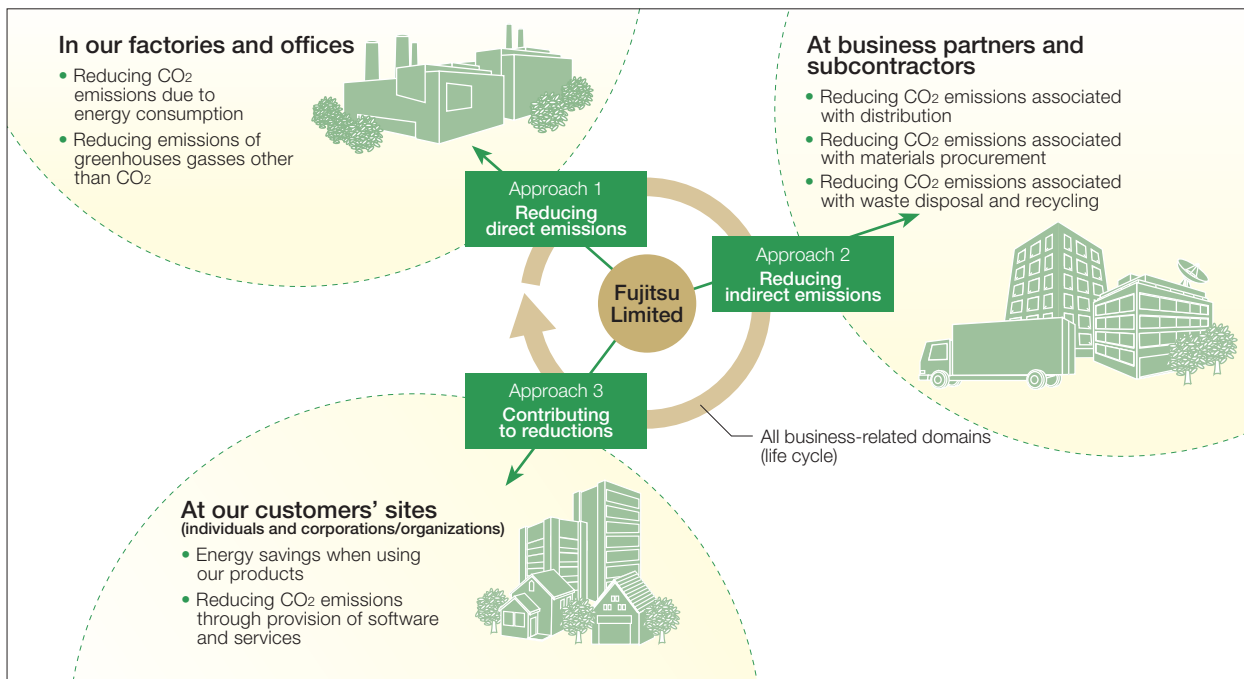
## Three Approaches to Reducing CO2 Emissions

On February 16, 2005 the Kyoto Protocol came into effect, establishing targets for reductions in CO2 and other greenhouse-effect gases as international obligations and increasing demands for corporations to press ahead more

vigorously than ever with measures to halt global warming.

We in the Fujitsu Group are working hard to reduce CO2 emissions in all areas of our business activities, focusing on three approaches that take the entire business life cycle into consideration.

### Three Approaches to Reducing CO2 Emissions



### Approach 1: Reducing Direct Emissions Reducing CO2 Emissions Due to Energy Consumption

We are moving forward with a variety of energy-saving measures and have made it a goal to limit the amount of CO2 emissions due to energy consumption to below the fiscal 1990 level by the end of fiscal 2010. As an intermediate goal, we have set a target of reducing such emissions to 15% below the fiscal 2000 level by the end of fiscal 2006.

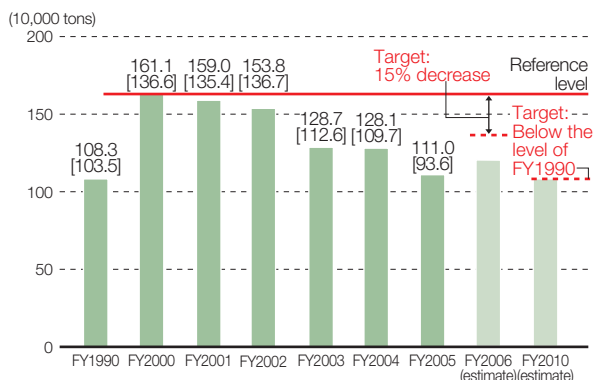
- Energy-saving measures for equipment with a focus on motive power facilities (introduction of free cooling, inverters, energy-saving facilities)
- Increased efficiencies through revised manufacturing processes, accompanied by proper motive power facility operation and improvement of management
- Proper settings for office air conditioning, energy saved with lighting and office automation equipment

Fiscal 2005 CO2 emissions due to energy consumption were about 1,110,000 tons-CO2 for the Fujitsu Group in total (domestic operations: 936,000 tons, Fujitsu Limited: 623,000

tons), which corresponds to a 31% reduction from fiscal 2000 levels and a 2.5% increase over fiscal 1990 levels.

In addition to the effect of energy conservation efforts, this 171,000 ton reduction from the previous fiscal year was attributable in large part to the impact of business restructuring.

### CO2 Emissions Related to Energy Consumption (Fujitsu Group Totals) [figures in brackets are emissions for Japan only]



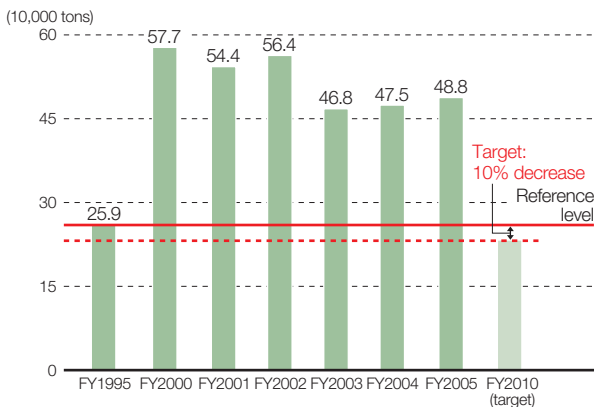
## Cutting Emissions of Greenhouse Gases Other than CO<sub>2</sub>

The semiconductor industry has established a voluntary action plan to cut the emissions of PFC, HFC and SF<sub>6</sub>, which are all greenhouse gases.

We have set a target of reducing emissions of greenhouse gasses other than CO<sub>2</sub> to 10% below the fiscal 1995 level by the end of fiscal 2010. Our Electronic Devices Group is continuing to change over to gases with lower global warming potential as well as install equipment to eliminate PFCs on new manufacturing lines.

Converted to Global Warming Potential (GWP) figures, these gas emissions corresponded to about 488,000 CO<sub>2</sub> equivalent tons in fiscal 2005. Although there are differences in our scale of production and manufacturing processes, this is an 88.4% increase from fiscal 1995.

### Emissions of Greenhouse Gases other than CO<sub>2</sub> (total for electronic devices)

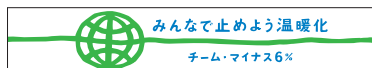


### Activities by Individual Employees—Participation in “Team Minus 6%” Campaign

To prevent global warming, the environmental awareness and involvement of each and every employee is of great importance. Since June 2005 we have participated in Japan’s “Team Minus 6%” national campaign to help prevent global warming.

This involves setting office air conditioning levels to 28°C and not wearing neckties and jackets in the summer, participating in efforts to cut down nighttime illumination, and setting office heating temperatures to 20°C in the winter.

To promote these activities, we set up a dedicated web site and created and distributed badges with the Team Minus 6% logo.




### 15% Reduction in CO<sub>2</sub> Emissions at Our Aizu Wakamatsu Plant


Our Aizu Wakamatsu Plant in northeastern Japan started operation in October of 1967 as Fujitsu’s first semiconductor mass production facility. Currently, it is a front-end semiconductor fabrication facility that mainly produces CMOS logic and analog devices used in AV and game equipment, digital appliances, automotive products, mobile phones, and other products.

This plant addresses environmental considerations and manufacturing innovation in an integrated, holistic manner, and in fiscal 2005 it succeeded in reducing CO<sub>2</sub> emissions by about 14,000 tons (equivalent to a reduction of 15% for the entire factory) through energy-saving measures.



Aizu Wakamatsu Plant

- Expanded introduction of free cooling**  
 We reduced the energy required for cooling water used by production equipment by implementing “free cooling” measures, which utilize cold outside air in winter, spring, and fall.
- Upgraded refrigeration equipment to energy-saving models**  
 In conjunction with measures to eliminate fluorocarbon refrigerants we upgraded older refrigeration equipment that had been in use over 20 years to the latest high-efficiency turbo refrigeration systems.
- Implemented energy-saving improvements in production equipment**  
 We attached power-saving units to the vacuum pumps used in the semiconductor wafer production process and thus curtailed pump power consumption.
- Introduced NAS batteries**  
 We are using NAS batteries to help even out power loads by storing power at night and discharging it for use during the day. These batteries are also used as countermeasures for brief voltage drops and power outages.
 

NAS batteries
- Promoted effective utilization of waste heat**  
 We use the waste heat from refrigeration equipment to heat the distilled water used in the production process, thus reducing the fuel consumed by boilers.
- Installed PFC removal equipment**  
 We began installing PFC removal equipment in existing production lines, having already introduced such equipment in new production lines (new plants).
 

PFC removal equipment

## Global Warming Countermeasures

### Approach 2: Reducing Indirect Emissions Reducing CO<sub>2</sub> Emissions Associated with Distribution

Our logistics divisions have primary responsibility for product distribution, and we have been working together with our shipping subcontractors to promote the reduction of CO<sub>2</sub> emissions associated with distribution through our “Green Logistics” activities.

In addition, in line with Japan’s Revised Energy Conservation Law\*, which came into effect in April 2006 and mandates that shipping contractors and shippers over a certain size make efforts to reduce CO<sub>2</sub> emissions, we are currently strengthening such efforts throughout the Group.

We have also newly established a target to reduce transport-related CO<sub>2</sub> emissions to 10% below the level in fiscal 2000 by the end of fiscal 2010.

- **Joint distribution with Group companies**

We are planning to engage in joint distribution with Group companies for products, such as PCs and servers, sold to corporate customers in the Tokyo metropolitan area starting in the first half of fiscal 2006.

- **Optimal relocation of Group distribution centers**

We will consolidate five distribution centers in the Tokyo metropolitan area into three centers in the first half of fiscal 2006.

- **Use of returning trucks for parts shipments**

Since October 2005 we have been using trucks returning from making product shipments to transport procured components to our manufacturing sites.

- **Optimal expansion of our modal shift program**

We are pushing forward with our modal shift program for PCs for corporate customers. Our modal shift ratio increased from about 12% in fiscal 2004 to 19% in fiscal 2005.

\* **Japan’s Revised Energy Conservation Law**

Under Japan’s Revised Energy Conservation Law (transportation section), transportation providers (including in-house distribution) that have a transport capability above a certain standard (200 trucks) and shippers (users of transportation services) that ship goods above a certain standard (30,000,000 ton-km) are required to create and submit an energy conservation plan, and to submit periodic reports on their energy consumption.

#### CO<sub>2</sub> Emissions Trends in the Distribution Process (Fujitsu Limited in Japan)

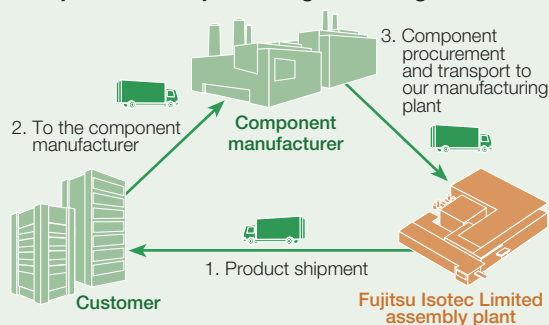
	FY 2003	FY 2004	FY 2005
CO <sub>2</sub> emissions (tons)	27,851	27,364	27,499

#### Reducing CO<sub>2</sub> Emissions by Using Returning Trucks

Fujitsu is working with suppliers to create a distribution system that imposes minimal burdens on the environment.

Since fiscal 2005, in cooperation with component manufacturers, we have been dispatching trucks that have completed delivery of our PC products to pick up and transport back to our facilities procured components such as hard disk drives. This practice is expected to reduce CO<sub>2</sub> emissions at our PC assembly plant (Fujitsu Isotec Limited), for example, by about 160 tons of CO<sub>2</sub> per year.

#### Component Transport Using Returning Trucks



#### Strengthening and Expanding “Logistics Solutions” that Respond to the Revised Energy Conservation Law

In light of the April 2006 revisions to Japan’s Energy Conservation Law, we have recognized a growing need to support our customers’ CO<sub>2</sub> emissions-reduction efforts and have accordingly strengthened and expanded our “logistics solutions” and begun providing them to our customers.

In particular, at the heart of our CO<sub>2</sub> reduction consulting services is a coherent set of solutions covering assessment of current conditions, creation of a reduction measures plan, implementation support, and evaluation. In reexamining customers’ distribution systems from an environmental burden standpoint, we also help them to take full advantage of IT to optimize their overall supply chains.

#### Solutions Framework to Support Green Logistics

