



Energy-Saving Measures (Against Global Warming)

Helping to combat global warming by reducing energy consumption.

Reducing electric power and fuel consumption at manufacturing and other sites helps to restrict CO₂ emissions as well as to protect energy resources, thus contributing directly to efforts to combat global warming. The Fujitsu Group has expanded the range of its energy-saving countermeasures and reinforced its efforts further in this area. We are establishing strict site-by-site goals as targets for achievement. We implemented measures in fiscal 2001 primarily to improve equipment operation and management, and examined and developed new themes to promote reduction of energy consumption.

* Fujitsu Group : 23 Fujitsu sites / plants, 28 domestic affiliates (manufacturing) and 19 overseas affiliates (manufacturing)

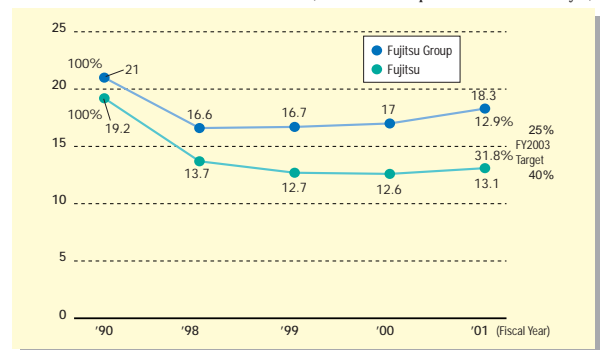
Energy-saving Results

We have set an energy-saving goal of reducing total electric power consumption per unit of sales by 25% for the Fujitsu Group as a whole and by 40% for Fujitsu Japan, relative to fiscal 1990 results, by the end of fiscal 2003. The Fujitsu Group's energy consumption in fiscal 2001 was 18.3 kℓ per 100 million yen crude oil equivalent, or a 12.9% reduction relative to fiscal 1990 results. The corresponding figure for Fujitsu was 13.1 kℓ per 100 million yen crude oil equivalent, or a 31.8% reduction. We are continuing to work toward meeting our fiscal 2003 year-end targets.

• Targeted energy: Total of electricity, oil and gas consumed at plants/operations (crude oil equivalent kℓ)

Energy Consumption per Unit of Sales

(Unit: Crude oil equivalent kℓ/100 million yen)



Energy Consumption

(Unit: Crude oil equivalent 10,000kℓ)

	1990	1998	1999	2000	2001
Fujitsu Group	62.4	86.8	87.5	93.1	91.6
Fujitsu	44.8	43.7	41.3	42.6	39.8

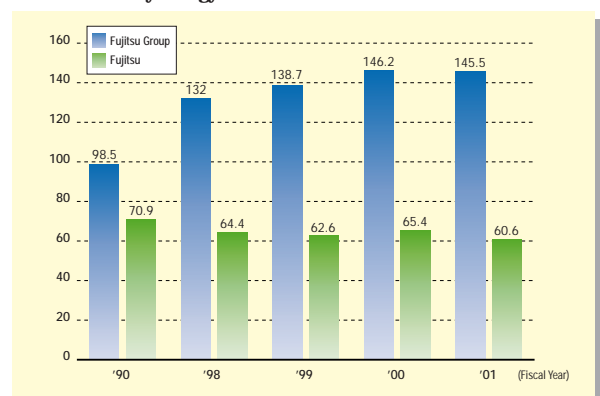
Results for CO₂ Emission Volumes

Approximate total energy consumption in terms of CO₂ emissions volumes was 1.46 million ton-CO₂ for the Fujitsu Group in fiscal 2001, the same as the preceding term, and 606,000 ton-CO₂ for Fujitsu Japan, down 7% from fiscal 2000. The amount has increased since fiscal 1990 for the Group, due to its business expansion.

* These calculations substitute Japanese coefficients for crude oil equivalents and CO₂ emissions volumes at overseas companies.

CO₂ Emissions by Energy Use

(Unit: 10,000 ton-CO₂)



Analysis for Fiscal 2001

We have established reduction of the absolute value of energy consumption by about 1% every year as a rough target for reduction activities at plants and offices (per unit of sales in the Protection Program).

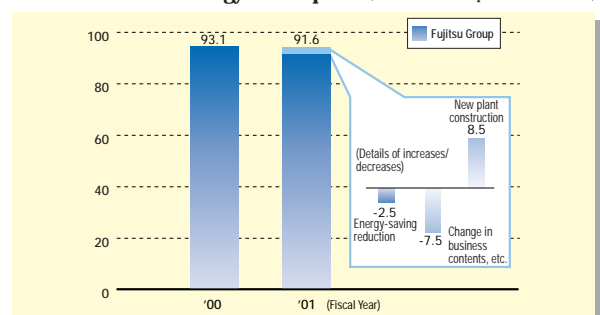
In light of the economic situation, we conducted mainly investment-free activities in fiscal 2001, and reduced energy consumption by 25,000 kℓ crude oil equivalent (about 40,000 tons-CO₂ measured in terms of CO₂ emissions).

- Improvement of operation/management (corresponding to temporary clean-room shutdowns)
- Examination and development of important measures by individual work groups (5 themes)
- Group energy-saving committees, etc.

Energy consumption by some companies decreased, due to changes in business content. Total energy consumption, decreased by 1.6% (15 thousand kℓ) compared with the previous fiscal year as a result of new plant construction.

Increase/decrease in Energy Consumption

(Unit: Crude oil equivalent 10,000kℓ)



Case Studies

The following are some examples of energy-saving measures implemented at manufacturing and other sites.

Thermal Storage Air-conditioning System (Fujitsu Mie Plant)

An advanced air-conditioning system introduced at the Mie Plant stores energy during daytime operation and transfers its use to the night shift. This process, employing a 4,000-ton water reservoir as a heat sink, can transfer some 1,000 kW of energy per day. Shifting of the energy consumption peak translated into a reduction of about 5% in total electric power consumption at the plant. The use of nighttime electricity realizes an approximately 260 MWh energy-saving effect and an approximately 190 tons-CO₂ reduction effect each year. (This type of system was also introduced at the Akashi Plant.)



Reservoir as a heat sink (Fujitsu Mie Plant)

Power Storage System (Fujitsu Akiruno Technology Center)

We are constructing one of the world's first large-scale power storage systems at our Akiruno Technology Center. Scheduled to become operational in June 2002, the system stores electric power at night for release during the day. Besides shifting the power supply, the system can also protect semiconductor production facilities from sudden drops in voltage. Its use of nighttime electricity plays the dual roles of power supply stabilization and energy conservation.

Installation of Inverter Compressors*1 (Fujitsu Kanuma Plant)

Energy-saving inverter units installed in the compressors at the Kanuma Plant supply compressed air to the PCB production lines. Since the compressors account for about 20% of the total power consumption at the site, however, this move promises to generate substantial energy savings of approximately 360 MWh per year.

Energy Monitoring Services by IT (Fujitsu Isotec)

Fujitsu Isotec has begun operating a monitoring system for each workplace to help control energy consumption. The service measures consumption of electricity by area and makes the information available in real time on an intranet. This helps to raise the employees' energy-saving consciousness and supports analysis and improvement of current conditions.



Monitoring System (Fujitsu Isotec)

Measures Implemented to Reduce Greenhouse Gases

The Japanese semiconductor industry has established self-action plans to reduce emissions of potentially harmful greenhouse gases such as perfluorocarbons (PFCs), hydrofluorocarbons (HFCs).

The Electronic Devices Division is leading our efforts at Fujitsu to apply the voluntary code of conduct formulated by the Japanese semiconductor industry, as well as relevant international standards. Specific measures include the

following:

- Use of substitutes for liquid PFCs
- Application of emission reduction technology to new production lines
- Survey/measurement of emission levels
- Support for R&D programs focusing on substitution, collection and reuse technologies

Further improvements in energy management and CO₂ emissions reductions remain necessary in response to revisions in the Principles and Law on Promoting Countermeasures against Global Warming and the Law Concerning Rational Use of Energy. Despite the current difficult economic conditions, we are taking measures as a Group, including deployment of an ESCO*2 business system (energy service) and investigations concerning the introduction of clean energy.

*1,2 Please refer to page 52 for definitions.