

Energy-saving Measures (Against Global Warming)

Green Factories

Efforts to reduce electric power consumption at manufacturing and other sites

Fujitsu has been implementing various energy-saving measures to reduce electric power consumption per unit of sales at manufacturing plants and other sites*1 by 40% by designating the energy conservation rate as a management target. These include the introduction of energy-saving equipment such as co-generation systems*2 and activities to promote efficient operation.

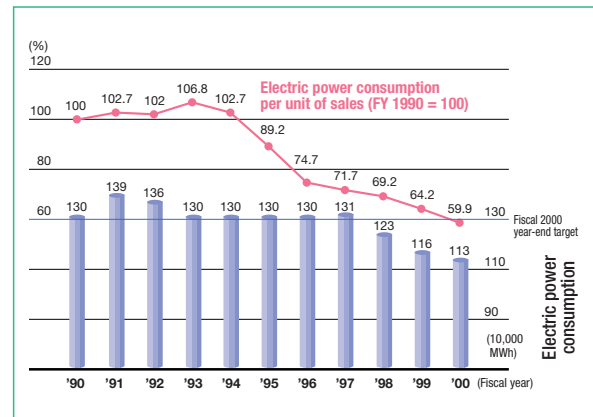
*1: The sites are the Kawasaki, Oyama, Nasu, Nagano, Numazu, Kumagaya, Minami-Tama, Akashi, Kanuma, Iwate, Aizuwakamatsu and Mie plants and the Tatebayashi System Center.

Energy-saving Results

Actual power consumption per unit of sales in fiscal 2000 totaled 33.4 MWh per billion yen of sales—a reduction of 7.0% compared with the previous year and 40.1% below the level recorded in fiscal 1990. This represented successful achievement of our goal of reducing power consumption by 40% from fiscal 1990 levels by the end of fiscal 2000.

Reference note: Expressed in terms of CO₂ emission equivalents, total energy consumption (electricity, oil and gas) in fiscal 2000 amounted to approximately 177,000 Ton-C (or 52,000 Ton-C/100 million yen per unit of sales). This was 9.0% below the fiscal 1990 level.

Reduction in Electric Power Consumption



Principal Energy-saving Measures

- Restriction of air-conditioning motor operation through inverter-mediated load-switching: Numazu Plant (4 motors)
- Annual reduction in power consumption: 310 MWh
- Effective use of cold external air during winter: Nagano Plant (Use of outdoor air to cool water in cooling towers to lessen the load on refrigeration equipment)
- Annual reduction in power consumption: 110 MWh
- Equipment of overhead lighting with energy-saving stabilizers: Kumagaya Plant (440 lights)
- Annual reduction in power consumption: 150 MWh
- Restriction of number of air-conditioning units used in computation center: Tatebayashi System Center
- Annual reduction in power consumption: 1,980 MWh
- Analysis of energy-saving activities by an external organization: Oyama Plant





“We are saving 3–5% more energy every year through individual efforts”

“All the Nagano Plant employees are engaged in efforts to save energy. Besides introducing a system that uses cold air from outside as part of our cooling system, we have reduced the operating times for our manufacturing and testing equipment. We have been attempting to reduce our energy use by around 3–5% per year. In the future, as we will be producing more key components such as hard-disk drive heads here, we anticipate an increase in energy consumption. We will respond by applying greater efforts and expertise to increasing energy conservation further.”



Atsuo Akutagawa General Manager, Nagano Plant

Site Management Based on Energy-saving Ratio*1

Fujitsu has introduced an energy-saving ratio to measure and manage the effects of energy-saving measures at each of its sites. In fiscal 2000, the total amount of energy saved*2 amounted to 990,941GJ*3, while total energy consumption*4 was 16,384,620GJ. The energy-saving ratio was therefore 5.7%.

*1: Energy-saving ratio:

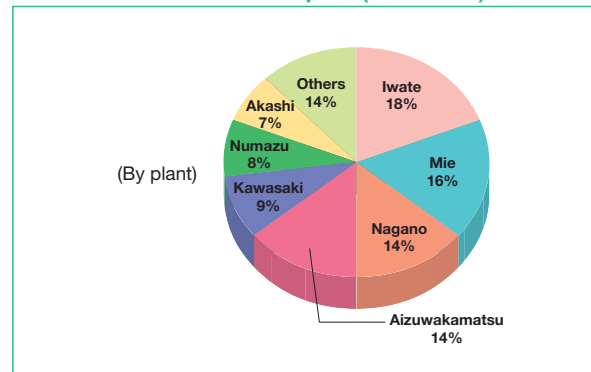
$$= \frac{\text{Amount of energy saved}}{(\text{Total energy consumption} + \text{Amount of energy saved})}$$

*2: Amount of energy saved:
 Total energy reduction resulting from energy-saving measures

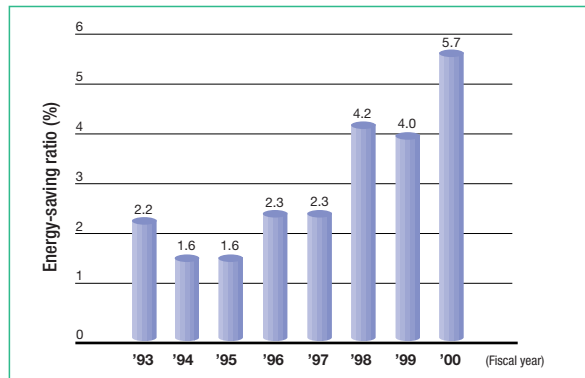
*3: GJ: Gigajoules

*4: Total energy consumption:
 Total of electricity, oil and gas energy consumption

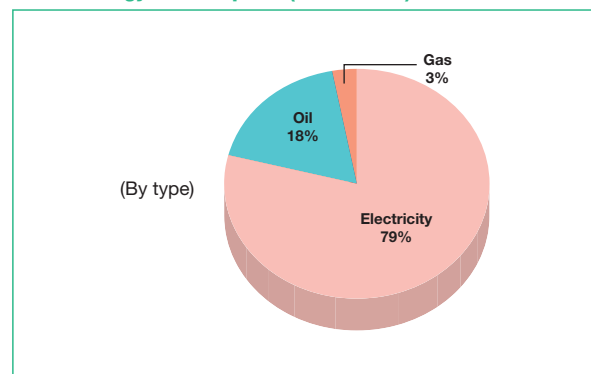
Actual Electric Power Consumption (Fiscal 2000)



Energy-saving Ratios



Actual Energy Consumption (Fiscal 2000)



- Introduction of ice storage air-conditioning equipment
 Introduction/expansion of energy-saving equipment and technology:
- Inverters: Kawasaki, Nagano, Numazu, Kanuma and Mie plants
 - Lighting/economizing devices: Oyama, Nagano, Numazu, Kumagaya and Minami-Tama plants
 - Efficient use of outdoor air and waste heat: Nagano, Mie, Kawasaki and Aizuwakamatsu plants
- Energy-saving measures with semiconductor production equipment
 Intensification of energy management through IT monitoring