

Energy-Saving Measures (Against Global Warming)

Green Factories

Aiming to reduce electric power consumption per unit of sales at manufacturing plants and other sites by 40% from its actual fiscal 1990 level by the end of fiscal 2000, Fujitsu has been implementing a variety of energy-saving measures. This has included the introduction and expansion of energy-saving equipment and technology, as well as efforts to promote operational energy efficiency in general.

Energy-saving results

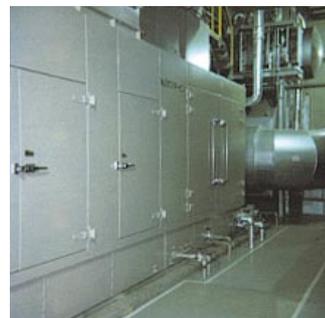
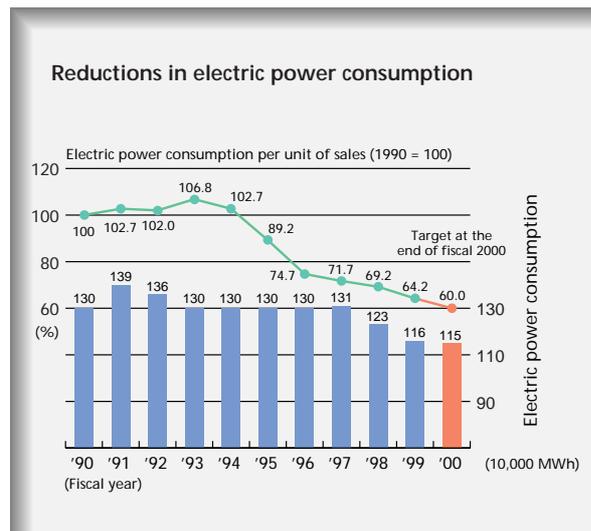
Actual electric power consumption per unit of sales in fiscal 1999 amounted to 35.8 MWh per 100 million yen of sales—a reduction of 7.2% compared with the previous year, and 35.8% below the level recorded in fiscal 1990. This exceeded the published target for fiscal 1999, which was a reduction of 34% relative to the fiscal 1990 level.

Reference note: if expressed in terms of CO₂ emission equivalents, total energy consumption (representing electricity, oil and gas) in fiscal 1999 amounted to 170,000 ton-C*¹, or 5.2 ton-C/100 million yen (per unit of sales). This was 4.4% lower than in the previous year, and 13.6% below the fiscal 1990 level.

*1: The unit ton-C denotes the weight of carbon contained in the corresponding carbon dioxide (CO₂).

Principal energy-saving measures

- Introduction of co-generation system: Iwate Plant (single unit)
Annual reduction: 33,600 MWh
- Operational control via an inverter-mediated load-switching mechanism: Mie Plant (22 pumps)
Annual reduction: 3,390 MWh
- Reduction in excess lighting voltage via economizing devices: Information Processing Systems Laboratory (8 units)
Annual reduction: 120 MWh
- Effective use of cold external air during winter: Suzaka Plant
(using outside air to cool water in cooling towers to lessen the load on refrigeration equipment)
Annual reduction: 80 MWh
- Changes made to internal air conditioning and humidity control systems: Oyama Plant (6 units)
Annual reduction: 350 MWh
- Introduction of power measurement/management systems: Kanuma Plant

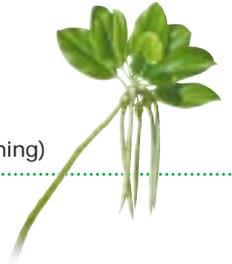


Co-generation system (Iwate Plant)

Investment in equipment

Total of ¥920 million

- Co-generation system (¥520 million)
 - Introduction of inverters (¥220 million)
 - Cold water manufacturing units to utilize external air (¥14 million)
 - Clean room insulation (¥13 million)
- etc.



Comment

We have been implementing a full-scale program of energy-saving measures since 1994. During fiscal 1999, through the introduction of two co-generation system units and a reduction in the capacity of the pumps used for cooling water, we managed to reduce our energy consumption by 2.4% compared with fiscal 1990. In terms of carbon dioxide output, this is equivalent to a reduction of approximately 3,800 ton-C. We have also been successful in reducing the amount of fuel and gas we use. Both these measures have a potentially positive effect on global warming, and we plan to keep on making further improvements.

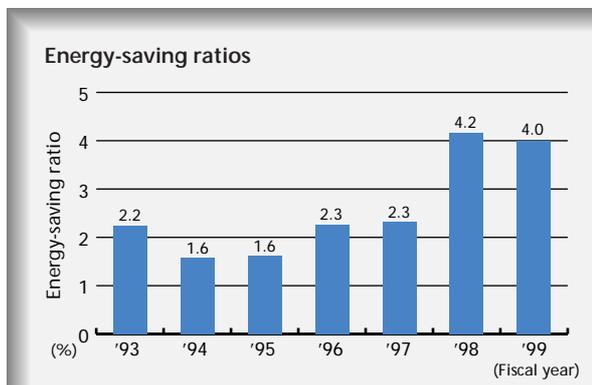


Izumi Tanaka
General Manager, Iwate Plant

Site management based on energy-saving ratio*2

Since fiscal 1993, Fujitsu has been employing an energy-saving ratio to measure and manage the effects of energy-saving measures at its plants and other sites. In fiscal 1999, in terms of crude oil equivalents, the amount of energy saved was 17,000 kℓ. Comparing this figure with total consumption of 414,000 kℓ shows that the overall energy-saving ratio was 4.0%—well above the operational yardstick of 2.0%.

*2: Energy-saving ratio = amount of energy saved / (total energy consumption + amount of energy saved)
Amount of energy saved: energy reduction resulting from energy-saving measures
Total energy consumption: total of electricity, oil and gas



Absolute energy consumption reduction target

From fiscal 2001, Fujitsu plans to replace the relative units used to date to measure energy-saving efforts with a new indicator that tracks reductions in the absolute amount of energy consumed. This shift will help Fujitsu reduce the consumption of not only electric power, but also that of oil and gas. At the same time, it will be applied to all Fujitsu buildings, offices and factories. Fujitsu is also working to hit the carbon dioxide emission reduction targets for fiscal 2000 set out in the plan for autonomous environmental measures by Japanese industry issued by the Federation of Economic Organizations.

Principal plans for fiscal 2000

- Introduction/expansion of energy-saving equipment and technologies:
 - Inverters: plants at Kawasaki, Oyama, Nasu, Nagano, Numazu, Akashi, Suzaka, and Mie plants
 - Economization devices: Nasu, and Kumagaya; Tatebayashi Systems Center; Information Processing Systems Laboratory
 - Collection and reuse of waste heat: Kawasaki, Akashi, Aizuwakamatsu, and Iwate plants
 - Reuse of outside air: Oyama, Nagano, Aizuwakamatsu, and Mie plants
- Clean room energy-saving measures
- Sampling of energy losses to diagnose energy-saving opportunities and consider countermeasures

