Zero Waste Emissions (Waste Reduction)

Targeting Zero Emissions through the 3R Policy.

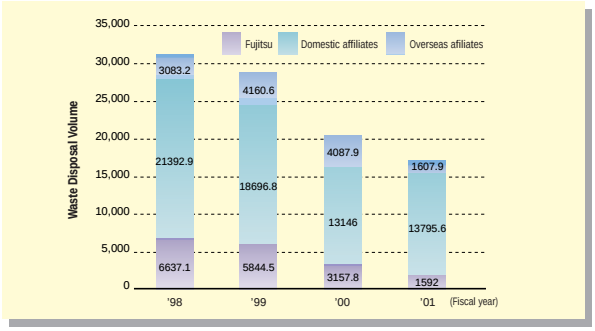
We are moving positively to implement measures aimed at early realization of zero emissions. We are targeting every kind of waste generated by our operations (since fiscal 2001 including waste generated in the process of living) based on our "3R" (Reduce, Reuse, Recycle,) policy. Our waste reduction results far surpassed our targets in fiscal 2001, as the Fujitsu Iwate Plant, for example, achieved zero emissions two years ahead of schedule. Overall, the activities have resulted in greater-than-anticipated success. Individual Group employees are participating in various ways, including efforts to reduce and reuse waste and to realize zero paper-waste emissions by promoting thorough separation in the administration offices.

* Fujitsu Group : 14 Fujitsu sites / plants, 28 domestic affiliates (manufacturing) and 19 overseas affiliates (manufacturing)

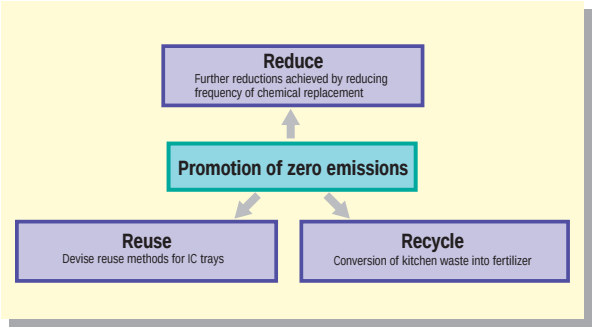
Results Achieved in Waste Reduction

We disposed of a total of 16,995 tons of waste in fiscal 2001, a reduction of 45.3% since fiscal 1998. Of this total, the volume of waste disposed of by Fujitsu alone in fiscal 2001 amounted to 1,592 tons, a reduction of 50% from the previous fiscal. Our waste reduction activities are making favorable progress.

Transitions in Waste Volume (Unit: tons)



3R Policy



Zero-Emission Program

We are working to achieve zero emissions of waste, including waste generated in the process of living (kitchen waste and purification vat sludge). These efforts include activities aimed at achieving zero emissions at 14 Fujitsu sites by the end of fiscal 2003. The Fujitsu Minami-Tama Plant and the Fujitsu Iwate Plant achieved zero emissions in fiscal 2001. Plants that have already achieved zero emissions are now targeting further reductions in reusable waste volumes equivalent to a reduction of 5% over three years, beginning the year following achievement of zero emissions.

Fiscal 2001 Analysis

The overseas Group companies achieved a reduction in waste in fiscal 2001 due to changes in their business contents, but the domestic group companies registered a slight increase because of the construction of new plants. Fujitsu recorded an overall reduction in waste due to the achievement of zero emissions. The main measures contributing to the reduction included the introduction of kitchen waste processors and effective use of sludge.

Manufacturing Plants Achieving Zero Emissions (Fujitsu)

- Fiscal 1999: Numazu Plant, Akashi Plant
- Fiscal 2000: Kumagaya Plant
- Fiscal 2001: Minami-Tama Plant, Iwate Plant

Definition of Zero Emissions

100% effective use of all output waste (with no waste sent to landfill or incinerated)

Targeted Zero-Emission Waste

(Purification vat sludge and animal/vegetable matter [kitchen waste] have been targeted since the beginning of Stage III of the Fujitsu Environmental Protection Program.)

- Waste acids and alkalis
- Waste plastics
- Sludge
- Waste oil
- Waste glass
- Wood chips
- Wastepaper
- Metal scraps
- Purification vat sludge
- Animal/vegetable matter (kitchen waste)

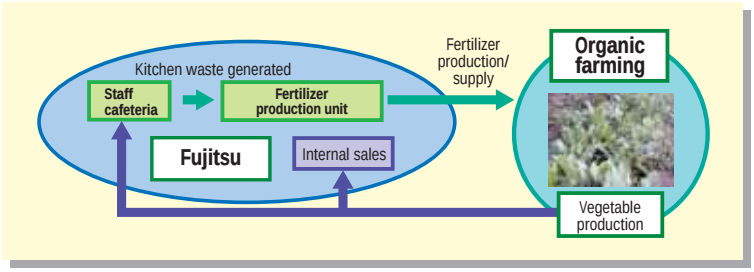
Zero-Emission Program Case Studies

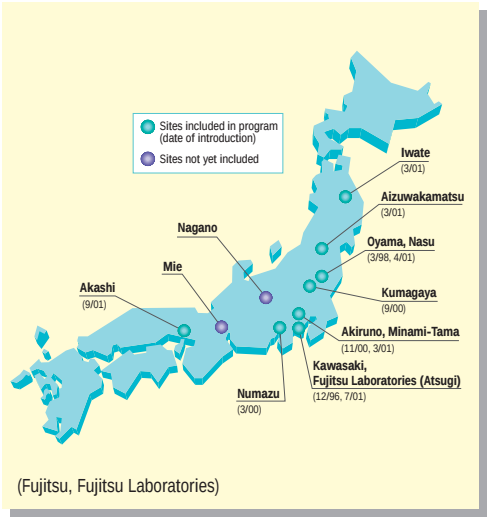
Reuse of Kitchen Waste in Organic Fertilizer

We produce organic fertilizer using kitchen waste from our staff cafeterias as raw material and supply it to organic farms. These farms supply organic vegetables to Fujitsu site cafeterias as well as selling them to our employees.

Fiscal 2001 Results

- Introduction of fertilizer production at 6 sites (total of 11 sites)
- Operation of a circulatory system (from kitchen waste to fertilizer to vegetables) at 2 sites (total of 3 sites)
- Vast expansion of volume of vegetables purchased from participating farms
  4 tons in fiscal 2000 → 44 tons in fiscal 2001
- Immense reduction in kitchen waste disposal
  270 tons in fiscal 2000 → 46 tons in fiscal 2001
  (recycling rate: 88%)





(Fujitsu, Fujitsu Laboratories)

First Semiconductor Plant to Achieve Zero Emissions (Fujitsu Iwate Plant)

The Fujitsu Iwate Plant has become the first semiconductor manufacturing facility in the industry to achieve zero emissions (including kitchen waste and purification vat sludge) — an unusual achievement for a Japanese plant. With kitchen waste, non-aqueous sludge, waste acids and waste oils all taken into account, the Iwate site formerly produced an annual volume of approximately 3,000 tons of waste. It achieved zero emissions through the establishment of recycling systems to convert waste into saleable products, accompanied by more efficient internal use. Processing costs have also been reduced by about 11% compared with fiscal 1993.

- Conversion of waste disposal facilities
  The toxic chemicals used in semiconductor production were formerly processed at on-site waste disposal facilities. These have now undergone conversion, with unpolluted areas assigned to other uses and the remainder undergoing clean-up.

Disassembly at a manufacturing facility (Fujitsu Iwate Plant)

- Reduction in waste chemicals volume
  Semiconductor manufacturing typically produces large volumes of waste liquid chemicals such as sulfuric and nitric acid. We formerly disposed of these as waste, but we have now introduced a recycling facility for sulfuric acid and reused recycled sulfuric acid at our plants.

A sulfuric acid recycling facility (Fujitsu Iwate Plant)

Promotion of Waste Recycling (Fujitsu Isotec)

Fujitsu Isotec is undertaking various recycling initiatives to reduce the volume of waste. The company's recycling facility separates waste into 52 varieties, 27 of which are converted into saleable products. Their recycling efforts cover an extensive range of factors.

- Resource recycling with polyethylene bags, films and air caps
  We formerly recycled such waste by sending it to steel makers for use as blast furnace reduction agents (as a substitute for coke). We have now introduced a waste plastic recycling facility that turns them into saleable plastic pellets suitable for use in plastic artificial wood materials.

Separated film

Volume reduction

Pelletization

Sale

Recycling polyethylene as an artificial wood material

- Use of sludge as cement raw material
- Processing of waste plastic into solid fuel
- Development of purification vat sludge processing technology
- Expansion of program of converting kitchen waste into organic fertilizer