Ⅳ・Environmental impact reduction management

Preventing global warming (Energy conservation and transportation measures)

We are actively pursuing energy conservation measures, including the incorporation of high efficiency equipment in new and reformed plant facilities, reform of industrial processes in order to deal with energy consumption due to production fluctuations, and preparation of new management standards to promote efficient facility operation. By improving transportation efficiency, we are also striving to achieve earth friendly transportation and delivery.

Environmental action targets

- **By the end of fiscal 2005 reduce energy consumption per sales volume unit by 10.4%, energy use by 10.1%, and CO_2 emissions by 13.8% from 1990 levels**
- **Implement clean energy use**
- **Improve transportation efficiency**
- **Promote modal shift**
- **Promote the use of regional ports**

◯ Achievements of the 2002 fiscal year

In order to prevent global warming, we are making efforts to conserve energy through an ISO system to manage our energy use for efficiency and control CO_2 emissions as much as possible.

In fiscal 2002 we achieved our goal to reduce energy consumption by sales volume 4.8% from the previous year and 8.4% from 1990 levels.

Although our energy use increased because of a slight recovery in production, we still managed to reduce our consumption of energy and CO_2 emissions by production volume, achieving our goals.

For transportation, by changing from a route delivery contract to a contract with fees based on weight shipped, we were able to improve our delivery efficiency from distribution centers to customers by 8%. We have also opened terminal points to avoid overlapping distribution routes and ensure efficient delivery.

We are further promoting modal shift by switching to delivery by truck to delivery by train for products that do not need to be delivered right away.

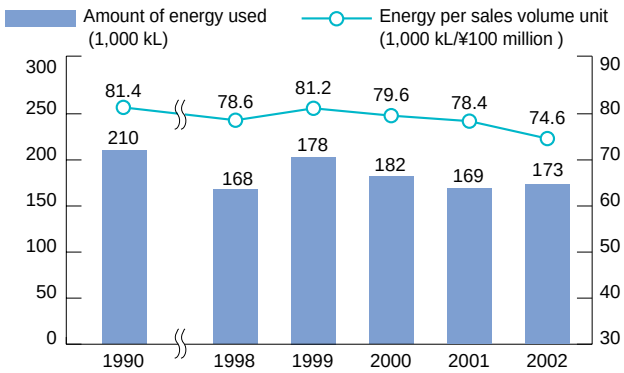
◯ Continuing efforts

Along with pursuing further energy conservation efforts related to production fluctuations, we are seeking to switch to natural energy use and energy sources that cause less global warming.

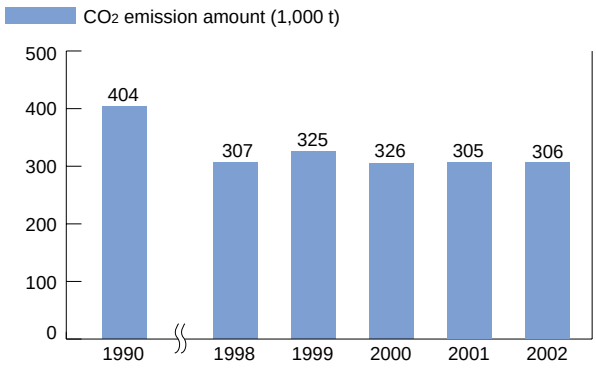
We have already begun the second step in making transportation more efficient through increasing the number of terminal point facilities and are planning to reduce the number of trucks by reducing route overlap and using large vehicles on trunk distribution routes.

We are also planning to install speed limiters in large vehicles beginning in September 2003, and from October 1, we will prioritize compliance with NOx restrictions on diesel vehicles that will be implemented in Tokyo, Saitama, Chiba, Kanagawa, and Hyogo Prefectures.

Transition in energy consumption and consumption by sales volume
(YKK Group main domestic production plants)



Transition in CO_2 emission amounts
(YKK Group main domestic production plants)



◯ Promoting the use of natural energy

We are promoting the use of green energy sources that do not create green house gases.

At the Kurobe Plant we have installed a solar electricity generation system that is being used to provide power for the exterior lights at the facility.

As part of a project to renew the front gate of the Tohoku Plant, we have installed a solar electricity generation system on the roof of the guardhouse.

Furthermore, we are also using power generated by a water wheel that captures the energy of water flowing down from the water supply to the factory. The electricity generated by this hydroelectric system provides a part of the plant energy supply.

Kurobe Plants solar electricity generation system

Tohoku Plant guardhouse building solar electricity generation system

Tohoku Plants hydroelectric equipment using industrial water

◯ Reducing electricity used for lighting by introducing localized lighting system equipment

In the textile material production division of the Fastening Products Group, late night operation was conducted by one person on a floor that was fully lit with 985 lights.

Energy conservation has been achieved by dividing this large floor area into 6 sections and using a PHS mobile phone as a remote control to turn lights on and off from a distance in the sections of a localized lighting system.

The effectiveness of this system has been confirmed, so the same system has been implemented on another floor with 918 lights.

PHS

Transceiver and receiver

Electricity distribution box for lighting

Effect	
Electric power reduction:	305,000 kWh/year
CO_2 emissions reduction:	109 t/year
Cost reduction:	¥3,818,000/year
Installation cost:	¥7,707,000
Cost recovery:	2 years

Illumination only in work area