



Global Warming Prevention and Energy Conservation Measures

Energy Conservation and Other Global Warming Prevention Measures

The first commitment period set by the Kyoto Protocol had begun when we entered the 2008 fiscal year. The government revised the Law Concerning the Rational Use of Energy (energy conservation law) and the Law Concerning the Promotion of the Measures to Cope with Global Warming (global warming countermeasure law) in 2008. Reporting is now required for a corporation in its entirety, including its offices and other facilities, not just its plants as had been the case in the past.

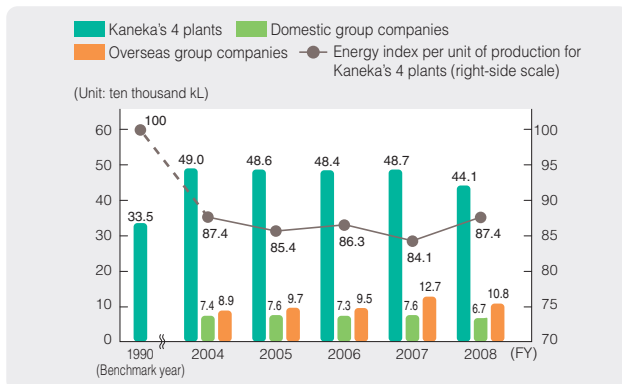
In the chemical industry, the Japan Chemical Industry Association, of which Kaneka is a member, has set energy per unit of production¹ as an index and established a voluntary action plan. We set a target of decreasing our energy index per unit of production² by an average of 1% or more annually, and we have continuously made efforts for this purpose. In fiscal 2008, we established our structure and conducted vigorous debates in order to further enhance our efforts. Among our efforts, we appointed a consultant and uncovered issues at our Takasago Plant, which has high energy consumption compared to our other plants.

In fiscal 2008, we reduced our energy consumption by 46,000 kL (crude oil equivalent) compared to the previous year. On the other hand, our energy index per unit of production was 87.4, a 3.9% increase from the previous fiscal year. Even our five-year average results did not show improvement.³ The main reason for this is that, caught by the global economic recession in the 2008 fiscal year, our efficiency declined as production volume decreased.

In the 2009 fiscal year, in addition to strengthening our efforts to identify issues related to reducing energy consumption corporate-wide, we will continue to realize the efficient use of energy by starting to execute concrete countermeasures for the issues that have been identified.

- 1: Energy per unit of production: this value is calculated as the amount of energy used in manufacturing (as a crude oil equivalent in kiloliters) ÷ the amount of production (t).
- 2: Energy index per unit of production: this value is calculated in comparison with the fiscal 1990 energy per unit of production, which is set as 100.
- 3: Due to changes in the coefficients used in calculations this time, we have also revised past values for energy and carbon dioxide.

Energy Consumption (crude oil equivalent) and Energy Index per Unit of Production



Kick-off event for energy conservation efforts (Osaka Plant)



Energy conservation training (Kashima Plant)

Controlling Carbon Dioxide Emissions

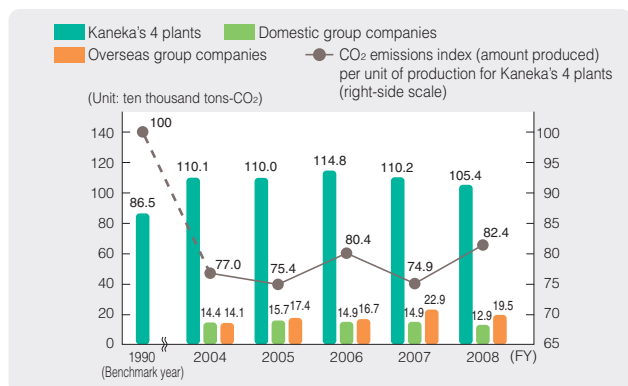
In fiscal 2008 the amount of carbon dioxide (CO₂) that we emitted due to the use of energy in our production activities was 1,054,000 tons, a decrease of 4.4% compared to the previous fiscal year. On the other hand, our CO₂ emissions index per unit of production⁴ was 82.4, a 10% increase over the previous fiscal year, having worsened in the same way as our energy per unit of production. In the 2009 fiscal year, focusing on measures to improve energy consumption efficiency, we will strive to reduce CO₂ emissions per unit of production by improving boiler operation, for example.

We also applied to participate in the trial phase of an emissions trading scheme for Japan⁵ that the government called companies for participation between October and December 2008. Since the problem of global warming has become a serious concern for humanity, we will continue our voluntary efforts to reduce emissions of greenhouse gases and fulfill our responsibilities as a corporate citizen.

4: CO₂ emissions per unit of production (CO₂ emissions (t) ÷ production amount (t)) calculated as a value with the baseline year of fiscal 1990 as 100.

5: Covering the first commitment period of the Kyoto Protocol, this system in which participating companies set voluntary targets and make efforts to achieve them, including by trading emissions, had been investigated on an experimental basis by the government since the announcement of the Fukuda Vision in June 2008.

CO₂ Emissions from Energy Consumption and CO₂ Emissions Index per Unit of Production



Carbon Footprint

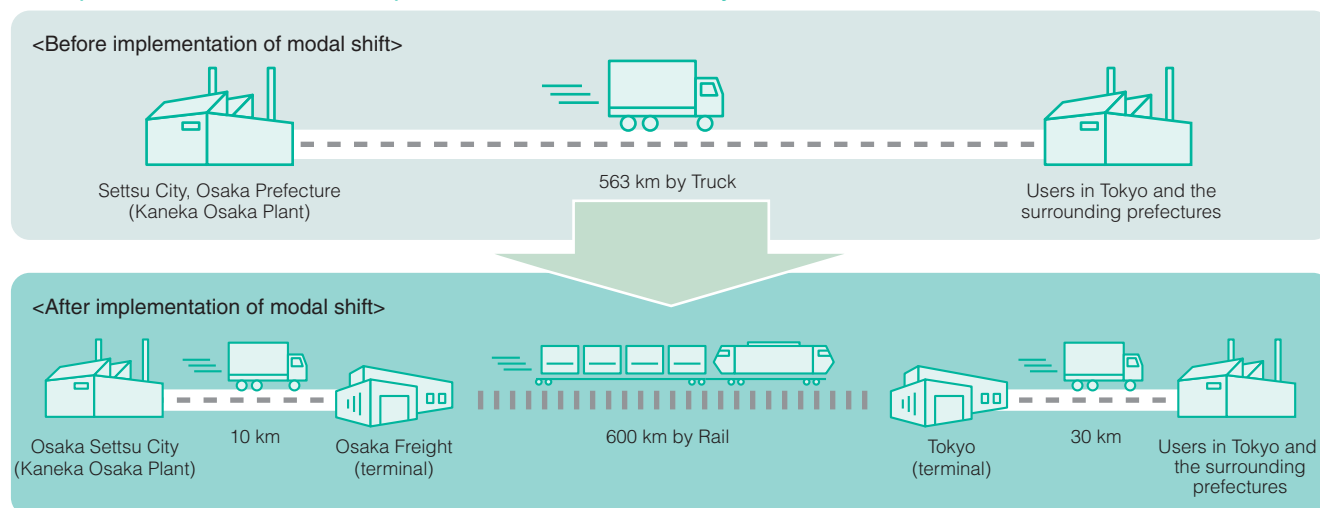
In the 2009 fiscal year, the Ministry of Economy, Trade and Industry of Japan began advancing preparations for the implementation of a trial project in the marketplace for a carbon footprint system* as an effort that unifies businesses and consumers for the prevention of global warming. In order to deal with global warming, which is a problem for the entire planet, it is important that consumers themselves are aware of the amount of CO₂ emissions caused by a product not only in its manufacture but also for its entire lifecycle, including transportation, use and disposal. With these types of undertakings, we are working in step with industry organizations to conduct efforts that fulfill our responsibilities for the realization of a low carbon society.

* Carbon footprint system: In this system the amount of greenhouse gases emitted by a product or service throughout its entire lifecycle (from the procurement of raw materials to use, disposal and recycling) is calculated as an equivalent amount of CO₂ and indicated for the product or service.



Carbon footprint standard mark

Example of Modal Shift for Transportation from Osaka to Tokyo



Energy Conservation Efforts in Our Distribution Activities

For years we have been working to make distribution more efficient and to reduce its environmental impacts. Our efforts include modal shifts to change the types of transportation used, increased cargo load ratios and the use of larger vehicles. Since fiscal 2007, in order to achieve an “annual reduction of energy per unit of distribution of 1%” as required in the revised Law Concerning the Rational Use of Energy, we have investigated and advanced ways to further increase efficiency in distribution in cooperation with related departments. As a result, our energy per unit of distribution was 5.5% less compared to the 2007 fiscal year. As a result of the effort to increase efficiency in distribution as well as reduce amount of production, our CO₂ emissions decreased by 13.5% (4,800 tons) to 30,800 tons in fiscal 2007.

Amount of CO₂ emissions in distribution and the energy index per unit of production

