



Efforts to Prevent Global Warming

The Cosmo Oil Group focuses on preventing global warming by promoting resource and energy conservation at all stages of its business activities, including material procurement, research and development, production, distribution, sales and waste disposal.

Policy

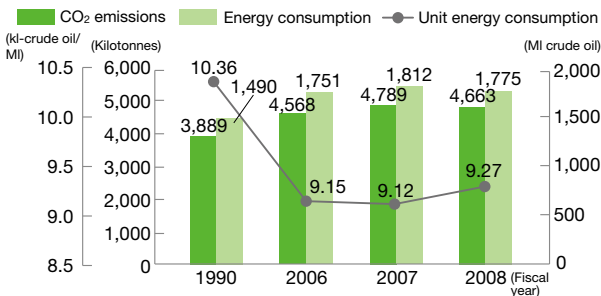
As a corporate group that handles fossil fuels, the Cosmo Oil Group regards the prevention of global warming as a matter of great importance. The Cosmo Oil Group pays particular attention to this issue at the refining stage, as it is responsible for more than 60% of the CO₂ emitted by the Group's business operations from crude oil production through the transport and storage of the finished product. All employees at refineries work together to improve energy conservation at the levels of the production line and operational aspects of production. Measures to conserve energy are also being taken at the Research and Development Center, distribution sections, and service stations.

Initiatives at Refineries

The Group's refineries conserve energy by implementing measures such as installing high-efficiency equipment and improving operating control. In fiscal 2008, Cosmo Oil took initiatives on production lines to raise pump efficiency and upgraded air heaters for furnaces. In terms of operational initiatives, the Company re-evaluated operating conditions and reduced steam consumption. Unit energy consumption¹ in fiscal 2008 was 9.27 kl-crude oil/MI, an increase over the previous fiscal year due in part to low rates of production line efficiency. Nevertheless, this level of consumption represented a 10.5% reduction over fiscal 1990.

1. Unit energy consumption is expressed as total energy consumption divided by a crude oil equivalent throughput taking into account the complexity of refining techniques. The unit is kl-crude oil/MI. Note that different types of energy consumed are converted into a common denominator of kl crude oil equivalent.

Energy Consumption and CO₂ Emissions at Four Refineries



*Beginning with fiscal 2006 results, the method of calculating CO₂ was revised as stipulated by the Act on Promotion of Global Warming Countermeasures.
*Fiscal 2008 CO₂ emissions have been calculated using the CO₂ emission factor for electricity for fiscal 2007. CO₂ emissions up to fiscal 2007 have been calculated using the CO₂ emission factor for electricity for each fiscal year.
*In addition to the figures shown in the diagram, N₂O released from the catalyst regeneration tower amounted to 21 kilotonnes of CO₂ equivalent in fiscal 2008.

Initiatives in Distribution

In fiscal 2006, amendments to the Act on the Rational Use of Energy were enacted to clearly define the responsibilities of cargo owners for conserving energy in their logistics processes. Accordingly, the Cosmo Oil Group's energy conservation initiatives focused more intently on efficient distribution. Beginning in fiscal 2007, the Group was primarily involved in measures to carry out the plan it submitted to regulatory authorities, based on the Energy Conservation Law. In fiscal 2008, unit energy consumption in transportation at Cosmo Oil alone was 8.95 kl/million tonne-kilometers, a 0.27 kl/million tonne-kilometer improvement over the previous fiscal year. The Group engaged in the transport of 6,603 million tonne-kilometers of freight, an increase of 1.5% compared to the previous fiscal year, while CO₂ emissions decreased 1.1% to 157,873 tonnes.

Ground Transportation Using Tanker Trucks

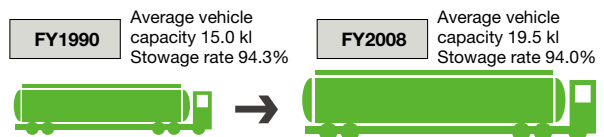
Despite using large trucks and maintaining high stowage rates, the transportation volume per vehicle stood at 17.5 kiloliters per delivery, a decrease of 0.1 kiloliters over the previous year. Energy use in diesel fuel fell 4.1% compared to the previous fiscal year. Unit energy consumption in shipments was 37.81 kiloliter/million tonne-kilometers, an increase of 0.08 kiloliter/million tonne-kilometers over the previous fiscal year. To further conserve energy, the Group will focus efforts on raising the efficiency of systematic delivery and independent unloading.

Sea Transportation Using Coastal Tankers

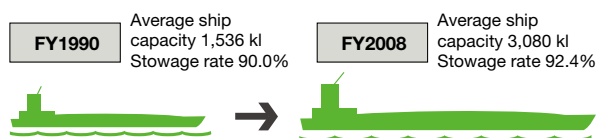
The Cosmo Oil Group has continued to utilize large ships and maintain high stowage rates. In fiscal 2008, the Group brought two new 6,000-kiloliter ships on line, raising the average capacity of the Group's white-oil tanker fleet by 3%. In fiscal 2009, the Group will work to further conserve energy by maximizing the use of this capacity and improving stowage rates.

Average Capacity and Stowage Rate

Tanker trucks for white oil



Coastal tankers



Message

Strengthening Efforts to Reduce Our Environmental Impact through Eco Drive



Masayuki Yuki
Director
Yuki Unyu Soko
Co., Ltd.

Having reached a basic shipping agreement with Cosmo Delivery Service Co., Ltd. for truck delivery, we have installed Eco Drive navigation systems in all of our tanker trucks. These systems, which are compatible with the shipping management system adopted by the Cosmo Oil Group in fiscal 2005, are now fully operational. Our drivers have worked to fully utilize the Eco Drive system, resulting in an average improvement in fuel consumption of 15% since the system was introduced. We remain committed to reducing our environmental impact and working with the Cosmo Oil Group to help build a sustainable society.

Initiatives at Service Stations

To create advanced, environmentally friendly service stations, the Group is installing solar power systems at 37 Cosmo Oil service stations. Cosmo Oil has endorsed an initiative by Kanagawa Prefecture to promote electric vehicles, and plans to install high-speed rechargers for electric car batteries at service stations in the prefecture in fiscal 2009. In addition, Cosmo Oil is reviewing and implementing effective initiatives to enhance the environmentally friendliness of its service stations, including the installation of LED lights to save electricity.



High-speed EV battery recharger

Kyoto Mechanisms

To reduce greenhouse gas emissions, the Cosmo Oil Group works to acquire carbon credits under the Greenhouse Gas Credit Aggregation Pool (GG-CAP), the first private scheme for purchasing carbon credits, which was set up by major emissions broker Natsource LLC. The Group's goal is to acquire credits arising from effective Kyoto Protocol Clean Development Mechanisms (CDM)² and Joint Implementation (JI)³ projects.

- 2. Clean Development Mechanisms: A Kyoto Mechanism that allows industrialized countries to generate emission credits through investment in emission reduction projects in developing countries.
- 3. Joint Implementation (JI): A Kyoto Mechanism that allows developed countries to invest in other developed countries to earn carbon allowances that can be used to meet their emission reduction commitments.

Team Minus 6% Initiatives

Team Minus 6% Activities at Offices

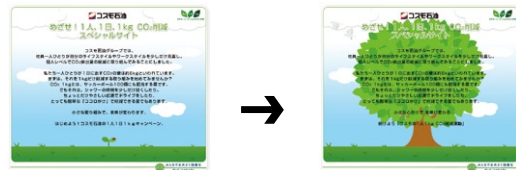
As part of its Team Minus 6% activities at offices, the Cosmo Oil Group has set reduction goals for the amounts of copy paper it uses, fuel consumed by company vehicles, and electricity consumed at offices. To attain these overall goals, each workplace sets its own targets and tracks its progress via a database.

Team Minus 6% Activities at Offices

Targeted Area	FY2008 Goal		FY2008 Results (Compared to Goal)	
	Cosmo Oil	Subsidiaries and affiliates	Cosmo Oil	Subsidiaries and affiliates
Copy paper	15,527 thousand sheets	20,148 thousand sheets	16,203 thousand sheets (+4.4%)	21,243 thousand sheets (+5.4%)
Company car fuel consumption	303 kl	648 kl	310 kl (+2.3%)	678 kl (+4.6%)
Office electricity consumption	1,495 MWh	2,769 MWh	1,431 MWh (-4.3%)	2,788 MWh (+0.7%)

Team Minus 6% Activities for Individuals

With the goal of raising awareness of environmental issues among employees, in 2007 the Cosmo Oil Group began soliciting participation in activities promoted by the Japanese government to reduce CO₂ emissions by one kilogram each day per person. In fiscal 2008, 4,765 employees participated in these activities and succeeded in reducing CO₂ by 1.066 kilogram each day per person. The activities encourage participants to conserve resources not only in the workplace, but at home as well.



The Team Minus 6% activities for individuals database site features an image of a tree that grows larger as the number of participants increases.

Initiatives at the Research and Development Center

The Research and Development Center has set the goal of reducing total greenhouse gas emissions for its ISO 14001 activities. The Center has adjusted the temperature settings for air-conditioners and is re-evaluating the concurrent operation of refrigerators and freezers used in testing. In fiscal 2008, it upgraded its power transformers and water pressure pumps to energy-saving models and made efforts to conserve electricity. As a result, the Center reduced the amount of electricity (both purchased and self-generated) it consumed by 7.5% compared to fiscal 2007.