Efforts to Prevent Global Warming

We work to prevent global warming by promoting resource and energy conservation in all stages of our business activities, such as material procurement, research and development, production, distribution, sales and waste disposal.

Policy

Because the Cosmo Oil Group is involved in the production and sale of petroleum products, we believe that addressing global warming is a crucial issue. Efforts in this area are particularly important at refineries, which account for more than 60% of total $\rm CO_2$ emissions produced by the Cosmo Oil Group. Accordingly, the refineries are undertaking energy conservation initiatives with an autonomous target of achieving a 15% reduction in unit energy consumption over the period from fiscal 2008 to 2012 compared to fiscal 1990 levels. Other key initiatives in our efforts to prevent global warming are described below.

- Crude oil extraction: The associated gases previously burned off during excavation are injected into the ground.
- 2. Refining: Production of sulfur-free gasoline and diesel oil
- 3. Distribution: Efficient delivery
- 4. Service stations: Distribution trials of bio-gasoline

Cosmo Oil is currently involved in other environmental activities intended to prevent global warming.

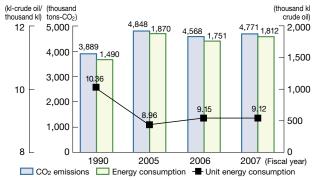
Initiatives at Refineries

The Group's oil refineries conserve energy by implementing such measures as introducing high-efficiency equipment and improving operating control.

In fiscal 2007, we raised pump efficiency, while also reviewing operating conditions, reducing the volume of steam consumption, and undertaking other measures to improve operating methods. Unit energy consumption* was 9.12 kl-crude/thousand kl in fiscal 2007, an improvement over the previous year. This represents a 12.0% reduction in unit energy consumption compared to the fiscal 1990 level.

*Unit energy consumption is expressed as the total energy consumption divided by crude oil equivalent throughput taking into account the complexity of refining techniques. The unit is kl-crude oil/thousand kl. 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 CO_2 was revised as stipulated by the Law Concerning the Promotion of the Measures to Cope with Global Warming.

Initiatives at Research & Development Center

The Research & Development Center has set targets for reducing its total emissions of greenhouse gases. In fiscal 2007, it cut emissions of greenhouse gases from electrical power and cogeneration fuels by about 12% over fiscal 2004 levels.



Research & Development Center

Initiatives at Subsidiaries and Affiliates

The Osaka plant of Cosmo Oil Lubricants Co., Ltd. has set targets for reducing its electricity consumption. Its steady

efforts to carefully adjust the temperature settings of air-conditioning equipment in offices and recreation facilities, along with other efforts, were successful. Hokuto Kogyo Co., Ltd. has promoted its Eco Drive since fiscal 2006, and has also improved its management of fuel consumption by equipping its tanker trucks with digital tachographs.



Eco Drive sticker

Message

We steadily carry out energy conservation plans to raise awareness and operate more equipment at a higher level of efficiency.

Hideshi Kurimoto

Manager, Technology Group, Refining & Technology Department



We conserve energy at refineries by investing in and improving the operation of equipment such as heat exchangers and inverters. No major investments were undertaken in fiscal 2007; instead, we focused on saving energy by operating equipment more efficiently. Energy conservation is monitored on a monthly basis, with energy consumption units reported every month. Employee awareness of energy conservation is high, and the views of those actually operating the equipment at refineries are reflected in energy conservation plans to the greatest extent possible. From fiscal 2008, we will look at energy conservation in terms of the entire industrial complex, and collaborate with other companies through synergistic effects.

^{*}Fiscal 2006 CO_2 emissions have been recalculated using the CO_2 emission factor for electricity in fiscal 2006.

^{*}In addition to the figures shown in the diagram, N₂O was released from the catalyst regeneration tower in an amount of 22 thousand tons of CO₂ equivalent in fiscal 2007.

Initiatives in Distribution

In fiscal 2006, amendments to the Energy Conservation Law were enacted to clearly define the responsibility of cargo owners for conserving energy in their logistics processes. Accordingly, the Cosmo Oil Group's energy conservation initiatives focused even more on efficient distribution. Beginning in fiscal 2007, the Company was primarily involved in measures to carry out the plan it submitted to regulatory authorities, based on the Energy Conservation Law. Cosmo Oil's efforts resulted in an improvement in energy consumption units to 9.22 kl/million ton-kilometers, down 0.20 kl/million ton-kilometers over the previous year (on an unconsolidated basis). The Company engaged in the transport of 6,504 million ton-kilometers of freight (up 0.4% over the previous year*), and CO₂ emissions amounted to 159,702 tons (down 1.9%*).

*Due to errors in the data for fiscal 2006, year-on-year comparisons are based on revised data.

Land Transportation: Tanker Trucks

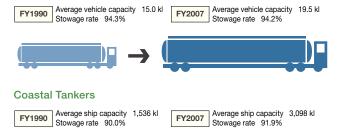
Through the utilization of large trucks and the maintenance of high stowage rates, the transportation volume per vehicle improved 0.11 kl per delivery over the previous year to 17.6 kl. Energy use (diesel fuel) fell 2.3% compared with the previous year, but the energy consumption unit worsened 0.01 over the previous year to 37.74 kl/million ton-kilometers. To further conserve energy, our efforts to promote efficiency will focus on systematic delivery and independent unloading.

Domestic Marine Transportation: Coastal Tankers

Cosmo Oil has been using larger tankers and maintaining a high stowage rate. We plan to increase the size of two new tankers (6,000 kl) to be completed in fiscal 2008. In our efforts to conserve energy, this capacity will be used to the optimum extent with the aim of improving on the fiscal 2007 stowage rate of 91.9%.

◆ Average Stowage Rate

Tanker Truck (White Oil)



Message

We work to reduce logistics costs and conserve energy by using large tankers and improving stowage rates.

Yoriaki Soga

Manager, Planning 2 Group, Distribution Department



We conserve energy by reducing the distance travelled through the use of tanker trucks. This is achieved by using large tankers and increasing stowage rates. Using larger tanker trucks results in larger service stations, but improved stowage rates are leading to higher stocks at service stations and planned distribution based on sales. Since fiscal 2007 and the implementation of the revised Energy Conservation Law, cargo owners have reported quantitative data on energy consumption in distribution to the regulatory authorities. In the future, we will reinforce affiliations with distribution subcontractors with the Eco Drive and other programs and make further cuts in energy used in tanker truck distribution.

Activities at Service Stations

Installing solar cell panels is one approach being taken to realize more environmentally compatible service stations. Currently, 37 service stations use solar energy. In fiscal 2007, we installed and measured the effect of energy-efficient lighting to illuminate service stations.

Kyoto Mechanisms

Greenhouse gas emissions trading, one of the Kyoto Mechanisms, is the framework for flexibly reducing greenhouse gases on a global basis, in addition to domestic efforts to cut greenhouse gases. To reduce greenhouse gas emissions, the Cosmo Oil Group participates in GG-CAP*1, the first private scheme for purchasing carbon credits set up by Natsource LLC, a major emissions broker, with the aim of acquiring carbon credits arising from CDM*2/JI*3 projects.

- *1 GG-CAP: Scheme for acquiring emission credits operated by a subsidiary of Natsource LLC, an organization that specializes in emissions trading.
- *2 Clean Development Mechanism (CDM): 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.