

## Distribution (Domestic Product Transport)

Petroleum products are transported by tanker trucks and domestic tanker ships from refineries to nationwide service stations, oil storage depots and factories. Cosmo Oil has from an early stage engaged in a variety of activities to increase efficiency and save energy, including increasing the size of tanker trucks and ships, standardizing waste collection at oil storage depots, and joining in partnership with other companies.

A goal of a nine percent reduction over 1990 levels of fuel consumption for both land and sea transport by 2010 had been planned; however, current results are already ahead of this target figure.

### Land Transport: Major Fuel Consumption Decreases Through Larger Vehicles and More Efficient Delivery

Energy conservation is being achieved in land transportation through a move to larger vehicles, longer operating hours and a reduction in the number of vehicles. The process of vehicle enlargement has been accomplished, bringing us to the top class in



#### Tanker Truck Average Size and Loading Capacity

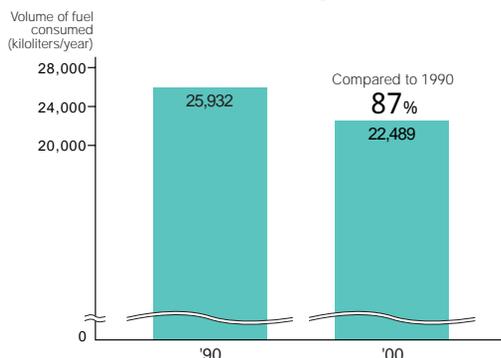
1990  
Average size: 15.0 kiloliters  
Loading capacity: 94.3%



2000  
Average size: 18.6 kiloliters  
Loading capacity: 94.0%



#### Tanker Truck Fuel Consumption Volume



the industry. Improvements have also been made in the operating hours for each truck, with nighttime, Sunday and holiday deliveries now being made.

This policy has resulted in year-2000 fuel consumption 13 percent below the figure for 1990.

Coming improvements such as the increased use of an automatic delivery system, expanded night deliveries and further improvement of delivery efficiency will all add to reduced fuel consumption.

### Ocean Transport: Rapid Move to Larger Vehicles for Increased Loading Capacity and Efficiency

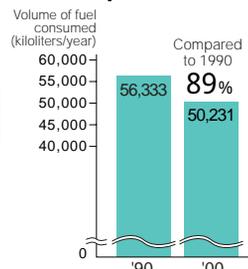
Tankers of the several thousand ton class are used for transport from oil refineries to distribution bases, oil storage depots, and other destinations. In recent years the increased operating rate made possible by the move to larger vessels and improved loading capacity has resulted in an 11 percent reduction in fuel consumption compared to 1990.

Cosmo Oil will continue in the future to carefully plan to reduce the mismatch of ships and cargo, make use of the cooperative relationship with Nippon Mitsubishi Oil Corp. in areas such as joint receiving, and continue to expand the size of ships used. By decreasing the number of vessels and increasing cargo handling at night and on holidays, we will continue to increase operating ratios and aim at further reduction of fuel consumption.



Increasing the size of domestic tankers

#### Domestic Tanker Fuel Consumption Volume



#### Domestic Tanker Average Capacity and Loading Capacity

1990  
Average capacity: 1,536 kiloliters  
Loading capacity: 90.0%



2000  
Average capacity: 2,927 kiloliters  
Loading capacity: 94.8%

