

devised our medium-term environmental plan, "Blue Earth 21*1", in which we set targets for nine objectives including the prevention of global warming and the reduction of environmental impact of products. We strive to become a company "environmentally preferred" by customers, shareholders and investors by making efforts to produce "clean" products and to reduce emissions of pollutants such as SOx (sulfur oxides) and the generation of waste at each process. This includes crude oil development, refining, and transport.

Reduction of Environmental Impacts from Business Operations

The life cycle of petroleum-based products starts with crude oil production in oil fields. Abu Dhabi Oil Co., Ltd., a subsidiary of Cosmo Oil, has been developing the crude oil business in Abu Dhabi in the UAE since the 1960s.

In the Abu Dhabi fields, the introduction of new technology was completed. Associated gases are compressed and reinjected into the ground, instead of being burned off. In many oil fields around the world, the associated gas that emerges as a byproduct of crude oil drilling is normally burned off at the site. The Zero-Flare*2 technology, a first for the Japanese petroleum industry, decreases CO2 emissions and, through the reinjection of the pressurized gas into the ground, increases recovery efficiency. In terms of crude oil transport, we formed a business partnership in 2000 with the former Nippon Mitsubishi Oil Corporation (presently, Nippon Oil Corporation), which aimed at joint operations*3, and have promoted efficiency in transportation and reduction of environmental impacts by taking advantage of economies of scale.

At oil refineries which process crude oil, we have been strengthening safety controls to practice day-to-day environmental management and to prevent accidents as well as implementing careful system checks and detailed control of facility operations to conserve energy.

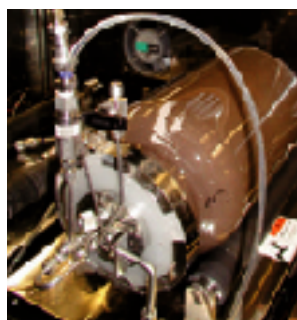
At service stations, we are taking measures for waste reduction and have started installing solar panels for energy conservation.



Service station equipped with solar panels

At our Research and Development Center, we are developing various environmental technologies to provide assistance for environmental protection activities at all stages of our businesses. As for hydrocarbon vapors, a cause of photochemical smog, which are produced during shipping operations at oil refineries and oil storage depots and during fueling at service stations, measures such as the installation of vapor recovery equipment are necessary. We thus continue developing adsorbents for vapor recovery equipment. In FY 2001, we successfully developed adsorbents that can be used with organic solvents as well as petrol solvents. As for the reduction of industrial wastes, Cosmo Oil has successfully used biotechnology to dramatically reduce the amount of excess sludge generated from wastewater treatment facilities (patent pending). A unit for performance evaluation is under construction at our refineries and long-term continuous operation is planned for FY 2002. We have also been involved in the development of technology for the remediation of oil in the soil.

In addition to laboratory evaluation, we conducted demonstration tests of this technology using a bioremediation method and developed know-how for soil remediation.



Experimental setup of the system for remediation of oil in the soil using a "bioremediation method"

*1 See page 7.

*2 See page 29.

*3 See pages 30 and 33.