

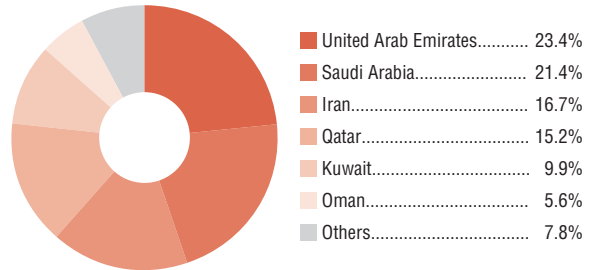
# Crude Oil Production

We strive to reduce the environmental impact of crude oil production in the oil producing countries.

## Overview of imports of crude oil

Cosmo Oil imports crude oil from the United Arab Emirates, Saudi Arabia, Iran, Qatar, Kuwait, Oman and other countries. Of these countries, the biggest exporter is the Emirate of Abu Dhabi, part of the United Arab Emirates, where we have been carrying out crude oil development since the 1960's and in 1968 we established Abu Dhabi Oil.

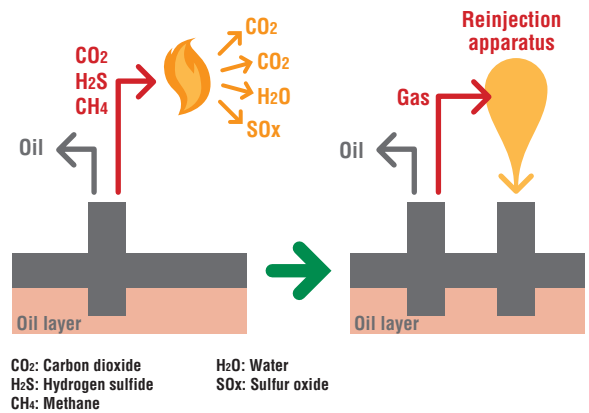
## Crude Oil Import Percentages by Country in 2003



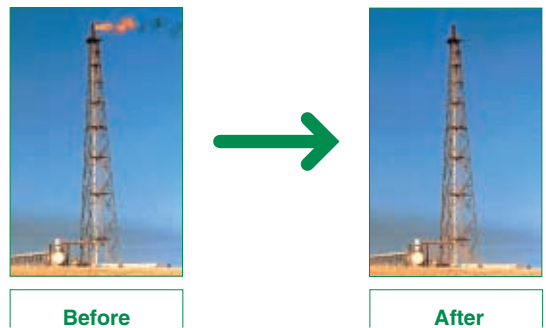
## Benefit of the Zero Flare Project

At the Mubarraz, AR and GA\*1 oilfields operated by Cosmo Oil's subsidiary Abu Dhabi Oil and its affiliate, Zero Flare was achieved on May 2001 — the whole volume of associated gas\*2 which previously was burnt off into the air is being reinjected into the oil layer using a large compressor and there is no emission of SOx or CO2 (flare refers to the flame arising from burning the associated gas). The success of this project not only contributes to prevention of air pollution, but also reduces greenhouse gases by the equivalent of 200,000 tons of CO2 per year. This is equivalent to a forest absorbing 12,000 times the volume of CO2 that could be held by the Tokyo Dome.

## Concept sketch of Zero Flare Project



## Before and after the implementation of the Zero Flare Project



The first stage of Zero Flare, the sour gas injection project, was highly praised by the Abu Dhabi National Oil Company (ADNOC), and in 2000 was awarded 1st prize among 62 entrants in the ADNOC HSE Awards.

### \*1 AR and GA oilfields

AR refers to the Umm Al Ambar Oil Field, and GA to the Neewat Al Ghalan Oil Field. Abu Dhabi Oil and its affiliate Mubarraz Oil operate the AR, GA and Mubarraz Oil Fields, mix the crude produced by the 3 fields and ship it as *Mubarraz Blend*.

### \*2 Associated gas

Associated gas refers to gas that emerges from an oil field during crude oil production. There are two types of associated gas, sweet and sour. Sour gas refers to natural gas containing more than trace amounts of acid gas such as carbon dioxide and hydrogen sulfide.