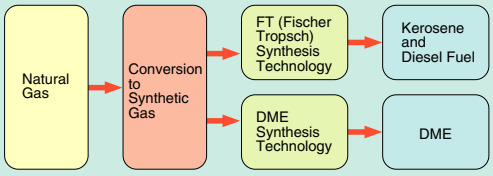
Sakai LNG Co., Ltd. as a joint venture with Kansai Electric Power Co., Inc. and others. This new company will build a shipping pier and base for LNG rigs on land adjacent to the Sakai Oil Refinery for the receiving, storage, vaporization, and delivery of LNG.

Natural gas has an advantage as it creates less environmental impacts during use, but transportation of LNG requires facilities that are capable of maintaining temperatures as low as -162°C during transportation and storage. For transportation of natural gas from gas fields, on the other hand, pipeline facilities are needed. Cosmo Oil therefore is developing a new technology called GTL (Gas to Liquid) technology with which natural gas is converted to liquid hydrocarbons for ease of transport. In collaboration with other companies, Cosmo Oil is participating in projects conducted by Japan National Oil Corporation and is developing catalysts for the production of liquid fuels from synthetic gases. We are carrying out demonstration tests at a pilot plant in Hokkaido. The possibilities of DME synthesis technology are also being evaluated.

Technologies for the Conversion of Natural Gas to Liquid Hydrocarbons (GTL: Gas to Liquid)



GLT technology involves chemical conversion of methane, the main component of natural gas, to synthetic gas (i.e., a mixture of carbon monoxide and hydrogen) which is then converted into kerosene and diesel fuel using the FT (Fischer Tropsch) synthesis technology or into dimethyl ether using the DME*1 (dimethyl ether) synthesis technology. Because the liquid fuels produced by GTL contain no sulfur and aromatics, they are viewed as a promising clean energy for the next generation.

Challenging Global Warming: Emissions Trading, etc.

Global warming is one of the issues that must be addressed by businesses and nations working together. To achieve the goal set for Japan at COP (i.e., a reduction by six percent from the level of 1990 by the years 2008 to 2012), we are working to make effective use of the Kyoto Mechanism*2 established at COP, which includes CO_2 emissions trading*3, CDM*4 and JI*5, as well as reducing environmental impacts throughout our business activities.

In May 2001, the new company, Natsource Japan, was founded by 12 major corporations, including Cosmo Oil, as an emissions trading agency. This company is involved in consulting on CO_2 emissions reduction and the development of the emissions trading agency business.

In June 2001, for example, we entered into an emissions trading option contract with a private Australian firm for the emissions of 2.8 million tons of CO_2. In this, the amount of CO_2 that is absorbed by the planted eucalyptus trees is traded. We believe that emissions trading provides indirect support for the maintenance of forests.

In Papua New Guinea, we are providing assistance for local people to make a transition from slash-and-burn farming to settled farming for global environmental protection*6.

***1 DME**
Chemical formula: CH_3OCH_3
DME is mainly used as an aerosol propellant. It is a chemically stable colorless gas that is easily liquefied under pressure at room temperature. It is attracting attention for its potential as a clean alternative to diesel fuel.

***2 Kyoto Mechanism**
The Kyoto Protocol provides a flexibility mechanism that facilitates the cost-effective fulfillment of national emissions reduction commitments for industrialized countries. The Kyoto Mechanism includes CO_2 emissions trading, CDM, and JI.

***3 CO_2 Emissions Trading**
This allows industrialized nations that have committed to greenhouse gases emission reduction targets to trade part of their emissions allowance.

***4 CDM**
(Clean Development Mechanism)
CDM allows industrialized nations that have committed to greenhouse gases emission reduction targets to invest in emissions reduction projects in developing nations and gain credits for the reductions achieved. This allows both nations to benefit: the industrialized nation can use the credits received to achieve its own targets, while the developing nation acquires technology transfer and investment.

***5 JI**
(Joint Implementation)
This allows industrialized nations to transfer to, or acquire from, other industrialized nations emission reduction units resulting from projects aimed at reducing greenhouse gases emissions or sequestrating greenhouse gases.

***6** See page 39.