## INPEX CORPORATION

JX Nippon Oil & Energy Corporation
Japan Petroleum Exploration Co., Ltd
Cosmo Oil Co., Ltd
Nippon Steel Engineering Co., Ltd
Chiyoda Corporation
Nippon GTL Technology Research Association

## The JAPAN-GTL Demonstration Test Project Completed

- Established a GTL\*1 technology made-in-Japan applicable to commercial plants -

INPEX CORPORATION, JX Nippon Oil & Energy Corporation, Japan Petroleum Exploration Co., Ltd, Cosmo Oil Co., Ltd, Nippon Steel Engineering Co., Ltd, Chiyoda Corporation (referred to as "six (6) private-sector companies") established the Nippon GTL Technology Research Association in October 2006, and have conducted a six (6)- year "JAPAN-GTL Demonstration Test Project" in cooperation with Japan Oil, Gas and Metals National Corporation in order to establish a JAPAN-GTL process \*2 applicable to commercial plants.

We are pleased to announce that we have achieved all of R&D goals concerning the JAPAN-GTL Demonstration Test project and successfully established a JAPAN-GTL process as an applicable technology to commercial plants.

In this project, the construction of a GTL demonstration plant with the capacity of 500 barrels per day (80 kilo-liters) took around a year and a half since September 2007 in Niigata city. The demonstration test operations were conducted from April 2009 until December 2011, and we verified high-grade performances of both GTL processes and catalysts for each process through more than 11,000 hours of demonstration operations, and achieved stable continuous operations for more than 3,000 hours as operation target.

At the same time, we conducted supplementary R&D activities including further improvement of catalysts and processes and a technical establishment of scale-up methods to a large commercial scale, and performance evaluation of JAPAN-GTL products and demonstration test runs using 100% JAPAN-GTL Diesel by city buses of Bureau of Transportation, Tokyo Metropolitan Government for around three (3) months. As a result of the demonstration test runs, we verified that the JAPAN-GTL Products can be used for actual services, without any

problems, as a clean fuel.

Besides we evaluated the costs of the GTL plant, and conducted market studies of GTL products; studies on its applicability to gas fields and economic evaluation in preliminary feasibility studies, before the JAPAN-GTL process established itself as economically applicable, competitive and emerging gas utilization technologies.

The JAPAN-GTL process is a groundbreaking technology that would for the first time ever allow for the natural gas containing carbon dioxide to be directly used. Since it can convert natural gas, shale gas and so on as a raw material, which should be potential resources spread in the world, into petroleum products such as clean naphtha, kerosene and diesel, which include no sulfur or aroma. It will open a window for securing liquid fuel resources and contributing to energy security in Japan.

We have deployed PR activities to the governments of gas producing counties, national oil companies and gas asset holders and so on as part of our efforts for commercializing GTL projects, and conducted preliminary feasibility studies with some governmental bodies and international companies.

We will continue to achieve a stable energy supply for Japan in harmony with the global environment.

- \*1 GTL:Gas to Liquids
- \*2 A proprietary process of GTL technologies developed by six (6) private-sector companies, JOGMEC and the Nippon GTL Technology Research Association.

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