August 4, 2009
Nippon Oil Corporation
Idemitsu Kosan Co., Ltd.
Iwatani Corporation
Osaka Gas Co., Ltd.
Cosmo Oil Co., Ltd.
Saibu Gas Co., Ltd.
Japan Energy Corporation
Showa Shell Sekiyu K.K.
Taiyo Nippon Sanso Corporation
Tokyo Gas Company, Ltd.
Toho Gas., Ltd.
AIR LIQUIDE Japan
Mitsubishi Kakoki Kaisha, Ltd

Commencement of the activities of the Hydrogen Supply and Utilization Technology Research Association by 13 Private Firms
~ Promotion of demonstration testing to enable the widespread use of hydrogen supply infrastructure and fuel cell vehicles~

The Hydrogen Supply and Utilization Technology Research Association (hereinafter "Research Association") held its first general meeting today and commenced activities aimed at achieving the full-scale widespread use of both hydrogen supply infrastructure and fuel cell vehicles (FCVs). The Research Association consists of the 13 following private corporations: Nippon Oil Corporation (President: Shinji Nishio), Idemitsu Kosan Co., Ltd. (President: Kazuhisa Nakano), Iwatani Corporation (President: Akiji Makino), Osaka Gas Co., Ltd. (President: Hiroshi Ozaki), Cosmo Oil Co., Ltd. (President: Yaichi Kimura), Saibu Gas Co., Ltd. (President: Yuji Tanaka), Japan Energy Corporation (President: Isao Matsushita), Showa Shell Sekiyu K.K. (President: Jun Arai), Taiyo Nippon Sanso Corporation (President: Hirosuke Matsueda), Tokyo Gas Company, Ltd. (President: Mitsunori Torihara), Toho Gas., Ltd. (President: Takashi Saeki), AIR LIQUIDE Japan (President: Francois Jackow) and Mitsubishi Kakoki Kaisha, Ltd. (President: Kikuo Yamanaka).

FCVs are said to be the next generation of vehicles that will truly be able to achieve both energy conservation and a significant reduction of CO_2 emissions*1. In order to achieve the widespread use of these vehicles, it is essential to develop hydrogen supply infrastructure including hydrogen stations.
By integrating the technologies and expertise of its member corporations for the supply and utilization of hydrogen, and by working hand-in-hand with automobile manufacturers, the Research Association will verify the stability, economic rationality and environmental suitability of hydrogen supply in order to achieve its commercialization.
Specifically, necessary arrangements will be made during this fiscal year for the construction of hydrogen supply infrastructure, and a series of demonstration tests will be carried out to highlight the three purposes described below. The Research Association's ultimate goal is to accomplish the commercialization of hydrogen supply by 2015*2.

[Purposes of demonstration tests]

(1) To assure a high level of user-friendliness by developing hydrogen supply infrastructure, including highly efficient hydrogen stations.

(2) To achieve reasonably priced hydrogen supplies competitive with conventional petroleum-based fuel.

(3) To develop technologies to create a hydrogen energy system that assures safety and peace of mind and contributes to the reduction of CO_2 emissions.

1 "Well-to-Wheel" CO_2 emissions (the total amount of CO_2 emitted during the entire process from the mining of primary energy resources, the manufacturing of fuel, transportation of the fuel, filling a vehicle with the fuel and right up to the initial driving of the vehicle) of FCVs are said to be half or less than the amount of CO_2 emitted by gasoline-powered vehicles (according to a study conducted by JHFC). Near-zero emissions can therefore be made possible by storing underground CO_2 generated during the hydrogen manufacturing process, and also by promoting the supply of hydrogen using

low-cost renewable energy such as solar power and surplus wind power.

* JHFC, the Japan Hydrogen & Fuel Cell Demonstration Project, is a subsidized project implemented by the New Energy and Industrial Technology Development Organization (NEDO). The project was run under the initiative of the Ministry of Economy, Trade and Industry during the Fiscal 2006 to 2008 period.

*2 The target time period during which to achieve commercialization has been chosen with respect to goals for the wide spread use of both FCVs and hydrogen stations as set forth by the Fuel Cell Commercialization Conference of Japan (FCCJ) in July, 2008. FCCJ was founded in 2001 in order to provide recommendations for the establishment of policies designed to solve issues that prevent the practical and widespread use of fuel cells in Japan.

[Overview of the Hydrogen Supply and Utilization Technology Research Association]

1. Director: Masahiro Yoshida (Executive Officer, General Manager of the Research & Development Planning Department, Nippon Oil Corporation)
2. Address: 1-2-6, Toranomon, Minato-ku, Tokyo, Japan
3. Founded: July 31, 2009
4. Business summary: Verification of hydrogen supply businesses through demonstration testing

(1) Installation and administration of hydrogen supply infrastructure

- Establishment of specifications for hydrogen stations and layout planning for hydrogen supply and stations
- Construction and maintenance of hydrogen production, shipment and transportation facilities and hydrogen stations
- Purchase, delivery and supply of hydrogen and the raw materials needed for hydrogen production
- Implementation of trial sales at stations and the administration of stations

(2) Management and administration of the use of hydrogen including fuel cell vehicles

5. Project period: 7 years (Fiscal 2009 to 2015)