First Acquisition of a Fuel Cell Vehicle by a Private Company in Japan / Completion of First Hydrogen Filling Station in Tokyo

-- Delivery Ceremony for Fuel Cell Vehicle and Launch Ceremony for Senju Hydrogen Station to be held on May 29, 2003 --

Tokyo Gas Co., Ltd.

Tokyo Gas Co., Ltd. (President: Hideharu Uehara) will hold a combined fuel cell vehicle delivery ceremony and H₂ filling station launch ceremony on May 29th. Tokyo Gas is the first private company in Japan to decide to acquire a fuel cell vehicle. Its Senju Hydrogen Station, being constructed in Arakawa-ku, is the first hydrogen station in Metropolitan Tokyo, and is approaching completion.

Tokyo Gas will acquire the Toyota FCHV, a hybrid fuel cell passenger car made by Toyota Motor Corporation (President: Fujio Cho), for which it concluded a 30-month lease contract on May 12. After taking delivery, Tokyo Gas plans to use the vehicle for general business, as well as for corporate communications and publicity campaigns at test-drive sessions and other environment-related events. The company expects to obtain a broader range of useful test data from the hydrogen station, because its in-house ownership of a fuel cell vehicle will make it possible to conduct regular proving tests.

The Senju Hydrogen Station has been under construction on a company-owned site at Senju in Arakawa-ku since November 2002. It is the result of a joint venture between Tokyo Gas and Nippon Sanso Corporation (President: Hiroshi Taguchi) through the JHFC Project (see below). When completed, it will be the first fixed hydrogen refueling station in Metropolitan Tokyo. The station uses LPG (liquefied petroleum gas) to produce hydrogen. Improvements have been made to the hydrogen production units, such as the adoption of compact and highly efficient hydrogen purification units using six-column PSA, based on proven industrial-use onsite high-purity hydrogen manufacturing technology based on reforming city gas. Once operations begin, in addition to conducting demonstrations of hydrogen production and supply technology, as well as gaining operational know-how through actually operating the hydrogen station and refueling fuel cell vehicles, the station will collect data on environment properties, energy efficiency, safety, and economy. In addition to using the proving test data for establishing regulations and standards, as well as for enhancing the social acceptance of hydrogen energy and fuel cells, Tokyo Gas also plans to provide feedback for technological developments and business studies. The Senju Hydrogen Station will also be one of the destinations for the technical visits associated with the World Gas Conference that begins June 2.

Tokyo Gas is actively engaged in promoting the practical utilization of hydrogen energy and fuel cells, including aiming for the practical utilization of residential fuel cell cogeneration in 2004. While contributing to the spread and expansion of hydrogen infrastructure by leveraging our city gas infrastructure in the Tokyo area, our experience

with natural gas vehicles, and our highly efficient hydrogen production technology based on reforming city gas, we are also aiming to create new business models.

Reference

■ JHFC Project (Japan Hydrogen & Fuel Cell Demonstration Project)

The JHFC Project is the first large-scale demonstration project in Japan. It is one of the polymer electrolyte fuel cell system demonstration tests of the Ministry of Economy, Trade and Industry, and is made up of research projects on subjects such as demonstration of fuel cell vehicle hydrogen supply facilities, conducted by the Engineering Advancement Association of Japan, and the Japan Electric Vehicle Association's demonstration research on fuel cell vehicles. (Three year project starting 2002)

■ Senju Hydrogen Station

- Construction site

Tokyo Gas Co., Ltd.'s Senju site at 3-28 Minami Senju, Arakawa-ku

- Main specifications

Hydrogen production capacity: $50 \text{ m}^3 N/\text{h}$ N = industry standard (normal) temperature and pressure

Hydrogen purity: 99.99%

Fueling capacity: Capable of continuously fueling 1 large bus or 5 passenger cars

- Division of responsibilities between Tokyo Gas and Nippon Sanso

Tokyo Gas: All station construction except for the dispenser

Nippon Sanso: Dispenser

■ PSA (Pressure Swing Adsorption)

Hydrogen purification unit using Pressure Swing Adsorption, which is widely applied in industrial use.

Tokyo Gas' previously developed an industrial, onsite hydrogen production unit for reforming city gas that had the same capacity and utilized 3 PSA columns, each with a 50-cm diameter and standing 2.9 m tall. The Senju Hydrogen Station will use 6 PSA columns, each with a diameters of 15 cm and height of 2.0 m.

■ Fuel Cell Vehicle Delivery Ceremony

Time and date: 10:00 on May 29, 2003

Place: Tokyo Gas Co., Ltd.'s Hamamatsu-cho head office building at 1-5-20 Kaigan,

Minato-ku

■ JHFC Senju Hydrogen Station Launch Ceremony

Time and date: 11:30 on May 29, 2003

Place: Tokyo Gas Co., Ltd.'s Senju site at 3-28 Minami Senju, Arakawa-ku

A hydrogen fueling demonstration and fuel cell vehicle test drive events are planned for guests and the media.