## Tokyo Gas' Joint Development of Residential PEFC Cogeneration Systems Targets a World's-first Product Launch in FY 2004

Corporate Communications Dept. Tokyo Gas Co., Ltd.

On July 31<sup>st</sup>, Tokyo Gas Co., Ltd. (President: Norio Ichino), whose plans call for the commercial launch of residential Polymer Electrolyte Fuel Cell (PEFC) cogeneration systems in FY 2004, announced that it has recently started joint development with two groups of fuel cell system makers to accelerate development of the technology needed to achieve this aim.

Joint Development Manufacturer Groups (Alphabetical order):

Ebara Ballard Group*1	
Matsushita Electric Industrial Co., Ltd.	

<sup>\*1:</sup> Ebara Ballard Group: Ebara Ballard Corporation, Ebara Corporation, Ballard Power Systems Inc.

With aspirations that include contributing to pleasant living and the mitigation of global environmental problems, the Tokyo Gas Group is working on the development of residential PEFC cogeneration systems as a new energy supply system because of their environmental-friendliness and energy-saving performance.

Finding solutions for global environmental issues is becoming more pressing, and fuel cells are becoming an increasingly important part of Japan's policies for new energy sources. Customers are very interested in the potential of residential PEFC cogeneration systems for making a large contribution to cutting carbon dioxide emissions in the residential energy sector. These factors all combine to provide a strong demand for bringing these systems to market at an early date.

Given this situation, Tokyo Gas has taken action to secure its FY 2004 launch target for commercial versions of these systems, by reaching agreement with the two groups of fuel cell system makers (listed above) that are most likely to be able to meet the target specification\*2. The agreement will result in the development of commercial appliances for the 2004 product year.

The product prototypes fabricated through the joint development program will be assessed in a variety of operating patterns to establish the optimum system configuration and the best way to control system operation, with the aim of finalizing detailed specifications for commercial appliances within FY 2003. Once that is done, manufacturing, sales, and servicing operations will be put in place for the commercial appliances, in preparation for a product launch in 4Q FY 2004.

In addition to these joint development programs, Tokyo Gas will continue to collaborate with a wide range of manufacturers, not just those in these two groups, on the development of next generation systems, for FY 2005 or later. Further enhancements in performance and reliability, as well as substantial cost reductions will be sought.

Through the research, development, and marketing of residential PEFC cogeneration systems, Tokyo Gas will actively contribute to the mitigation of environmental loads due to residential power and hot water generation and will produce a more pleasant lifestyle for our customers.

## \*2: Target Specifications

Rated Output:	1 kW
Electrical Conversion Efficiency:	31% min. (HHV)
Total Thermal Efficiency:	70% min (HHV)
Operation:	Capable of daily start-stop operation and electric load tracking while satisfying