

ARO-FE ENVIRONMENTAL Bulletin

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- NSF S&T Highlights

CONFERENCES

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ARO 2001 REVIEW

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CONTACT INFORMATION

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FUEL CELL ENERGY Powering a Cleaner Future



U.S. Eco-Energy 2002 was held on February 27-28, 2002 at MIPRO M-1 Hall in Sunshine City, Ikebukuro, Tokyo, Japan. This conference was organized by The Commercial Service of the United States Embassy, Tokyo. Thirteen US Companies participated.

The focus of this event was environmentally friendly on-site energy.

<http://www.buyusa.gov/japan/en/index.php?page=101>

Dr. Takuya Homma, Executive Director, Fuel Cell Development Information Center, Tokyo Japan, overviewed the history and recent work on research and development of fuel cell technologies in Japan. Please click on the attached word document for tech briefs* on the yr. 2002 status of fuel cell development in Japan. The 2001 and 2000 documents on the same subject, by Dr. Homma, are also included. The systems discussed are: **PAFC** (Phosphoric Acid Fuel Cell). **PEFC** (Polymer Electrolyte Fuel Cell). **MCFC** (Molten Carbonate Fuel Cell). **SOFC** (Solid Oxide Fuel Cell). **Fuel Cell Battery** with Co-generation for Household. **FCV** (Fuel Cell Vehicle). **Fuel Cell Battery** for Handy Phone & Portable Electric Equipment.

Japan's Policy on Fuel Cell Development:

The Japanese Government has announced that Japan will accelerate R&D on the actual application of fuel cell, and will realize the actual application of fuel cells to automobile and household equipment. The number of fuel cells in use is expected to be 50,000 in the year 2010 & 5,000,000 in year 2020 for *Fuel Cell Vehicles*. Also, household usage of 2,100,000 kw by 2010 & 10,000,000 kw is predicted by 2020. Here are some of Dr. Homma's conclusions: Among the major kinds of fuel cell system (such as PAFC, MCFC, SOFC, and PEFC), PAFC is the only fuel cell being close to commercialization. However, considerable effort is still required in areas such as cost reduction and market exploitation to reach full commercialization. MCFC power plant has been under intensive development in Japan under the national project for realizing it as a relatively large-scale power plant combined with coal gasification and gas or steam turbine. The operational demonstration project of 1,000kW MCFC pilot plant with the external reformer and the 200kW plant with internal reformer were successfully completed by January 2000, and it is now going through the next phase of the national project. Click on the attached URL addresses for more information on Fuel Cells.

* ARO-FE has a copy of Dr. Homma's 2002 Oral Presentation, Japanese Edit. Will translate and post his presentation The ARO-FE website the near future.

 "US Eco-Energy 2002	 Oral Presentation at	 Present Status o
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H Power Corporation; <http://www.hpower.com>
T E S: <http://www.teledyneenergysystems.com>
Nuvera Fuel Cells; <http://www.nuvera.com>
Fuel Cell E, Inc. ; <http://www.fuelcellenergy.com>

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