VITAL STATISTICS
Population
128 Million
Territory
377,947 km²
Capital
Tokyo
GDP/capita
USD 39,530 (FY2009)
Average Annual GDP Growth
5.2% (FY2009)
Primary Energy Structure
FY 2009
Production
Total production 20,893 PJ
Coal: 21%
Oil: 42%
Natural Gas: 19%
Large-scale Hydraulic: 3%
Nuclear: 12%
Others: 3%

Imports
17,831PJ
Coal: 25%
Oil: 55%
Natural Gas: 20%

Electricity
1,113 MWh

Production
Hydro: 8%
Thermal: 67%
Nuclear: 25%

JAPAN
Author
New Energy and Industrial Technology Development Organization

INTRODUCTION AND BACKGROUND

NEDO’s New Energy Technology Department is promoting technological development projects encompassing basic research, experimental studies, and the establishment of benchmarks and standards in cooperation with industry, academic institutions, and governments. NEDO is now carrying out seven projects in the fields of stationary fuel cell systems, FCVs, and hydrogen infrastructure.

UPDATE ON MEMBER’S ENERGY FRAMEWORK

The Fuel Cell Commercialization Conference of Japan (FCCJ) proposed a scenario for the adoption of FCVs and hydrogen stations. It described 2015 as the target year to begin commercialization of FCVs for the general public and 2025 as the target year to increase the number of FCVs and hydrogen refueling stations based on profitable business activities.

Commercialization Scenario for FCVs and H₂ Stations

UPDATE ON JAPAN HYDROGEN R&D&D SPECIFICS

JAPAN HYDROGEN FUEL CELL DEMONSTRATION PROJECT PHASE 2 (JHFC2)

Status and accomplishments

JHFC2 has been carried out since 2006, and it will end in 2011. For reference, JHFC1 was carried out during 2002–2006. For JHFC1 & 2 and their cooperative stations, a total of 20 stations, 135 FCVs and 13 FC buses have been operated. The total running distance was 1,470,000 km with 42,000 kg of refueled hydrogen. A final report will be published in March 2011.

A follow-up project is being planned to start in 2011.
Participation
The 8 automakers and 15 energy companies indicated below participated in JHFC2.
Automakers: Toyota, Nissan, Honda, Mercedes-Benz, General Motors, Hino, Suzuki and Mazda.

Funding
JPY 870 million was funded by NEDO.

DEVELOPMENT OF PEFC TECHNOLOGIES AIMING AT PRACTICAL APPLICATION

Status and accomplishments
The project includes three sub-projects as below. The targeted advancements are expected to be achieved during the full-scale commercialization stage (2020 to 2030) when fuel cell vehicles are expected to have a lifespan exceeding 100,000 km and residential stationary fuel cells are expected to have a service life comparable to that of home appliances.

Base Technology
A number of academic-industry consortia were formed to carry out R&D on improving the performance of PEFCs and reducing the amount of Pt catalyst in order to realize a cost reduction.

Development of Basic Production Technology
Technologies for a residential fuel cell system (“ENE-FARM”) are being refined in order to further promote the use of fuel cells and expand the market.

Development of Technology for Next-generation Fuel Cells
Innovative and advanced research and development is being carried out to contribute to achieve high reliability and lower the cost of PEFCs.

Participation
The participants are academia and industry.

Funding
JPY 5.1 billion was funded by NEDO.

OTHERS
Other NEDO funded RD&D projects related to hydrogen and fuel cell are:
- Development of System and Elemental Technology on SOFC
- Development of Technologies for Hydrogen Production, Delivery and Storage Systems
- Fundamental Research Project on Advanced Hydrogen Science
- Advanced Fundamental Research on Hydrogen Storage Materials
- Demonstrative Research on SOFC
REFERENCES

MEMBER WEBSITE


OTHER IMPORTANT WEBSITES

http://fccj.jp/index_e.html

CONTACT INFORMATION

Mr. Tadashi Ito
Chief Officer
Fuel Cell and Hydrogen Technology Group
New Energy Technology Department
18F Muza Kawasaki Building
Omiya-cho 1310, Saiwai-ku, Kawasaki-city, 212 8554 Japan
E-mail: itohtds@nedo.go