

21st Century, the New Era to be Empowered by Hydrogen Energy

MAGARA Kinji

By reducing importation of crude oil from the politically unstable Middle East, I propose Japan to start importing natural gas from the Siberian Far East. Natural gas is the cleanest fossil fuel resource among all and can be converted into liquid by the GTL (gas-to-liquid) technology, prior to the arrival of new hydrogen economy. Importation of gas may be made from the Siberian Far East through a pipeline system which runs along the Japan Sea coast.

It is possible to construct underground storage tanks in the depleting oil/gas fields of the Niigata, Yamagata and Akita prefectures as well as in the aquifers of other regions along the Japan Sea coast. Underground storage is probably the safest method of storing natural gas. Near the coal-burning electric power stations, steel and cement factories, for example, CO₂ injection into underground aquifers may also be possible to drastically reduce carbon emission. Places for such injections may be found in the Sanin District including the Shimane Prefecture.

Possible pipeline system which can be constructed for natural gas may also be used for hydrogen in the future, if and when the era of "natural energy-hydrogen-fuel cell" arrives. Once the Kyoto Protocol becomes effective, the effort made by Japan in terms of reducing carbon emission may be used for the emission trading.

**An Analysis on China's Public Finance System Reform
after WTO Entry :
Recentralization Tendency of Intergovernmental Fiscal Relations**

ZHANG Zhongren

In the near future, some large reforms are implemented on China's public finance system. This paper examines some changes of intergovernmental fiscal relations with administrative division reform, and tax system reform, and some decreases and exemptions of tax in rural areas, and "reform of fees and taxes" bear on the extra-budgetary system, and by theory of intergovernmental fiscal relations, analyses impact of fiscal reforms on China's public finance system after WTO entry. In particular, newly admeasure income tax between central government and local government and the control become reinforce on expenses. Anyway, in this way, the centralization tendency look con not to fit the ongoing market economy system.

**A Study of the Preparatory Japanese Language Education Program
in the University of Shimane :**

**A Report and Evaluation of the Japanese Language Training
for the Friendship Foreign Students in the University of Shimane 2003**

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This study is a description and evaluation of “the Japanese Language Training Program for Friendship Foreign Students at the University of Shimane 2003” from February 12 to March 26, 2003.

The purpose of the program was to help Friendship Foreign Students develop a) Japanese abilities needed in life, b) Japanese abilities in study and research, and acquire c) knowledge of Japanese culture and society, d) a basic background in the social science. Students participated in three courses: Academic Japanese, basic Japanese supplement, and basic social science knowledge. A total of five student participants sat through 112 class sessions, each one lasting 90 minutes.

Two tests were given for purposes of evaluating the program: a pre-test and a test after the training was completed. In addition, students and teachers were asked to fill out a questionnaire.

The results indicate a remarkable increase students' Japanese abilities and skills, and substantial gains in terms of knowledge of Japanese culture and society and basic social science knowledge. However, similar increases were not noted for matriculated Japanese students at the University of Shimane. Although further study is warranted, it seems clear that the program did lead to improvements language training.