

Reach for Power

By Naohiro Amaya

Of the world's population of five billion, the industrial countries are home to only one billion. The remainder live in developing countries. Per capita energy consumption in the United States is 6.6 tons oil equivalent per year. The figure for Japan is 2.6 tons. Both of these figures are in sharp contrast to China's 0.5 tons and India's 163 kilograms.

It stands to reason that Chinese and Indian energy consumption will increase if their efforts for industrialization and economic development are successful. Imagine the problems it would cause if, for example, per capita energy consumption in those countries jumped even to 1 ton per year. Assuming all of this energy were supplied by oil, their total annual oil consumption would increase to 1.8 billion tons—three times what it is today. World oil consumption now stands at 3 billion tons, and there is considerable doubt as to whether or not the supply could increase fast enough to meet the demand for another 1.2 billion tons. Even if supplies could be increased, this would inevitably drive oil prices up sharply.

What would happen if the increase in energy demand were met by coal? The biggest problem would be the deluge of acid rain that this would generate and the large-scale deforestation that would result. Although there are many unanswered questions concerning the greenhouse effect, there is little doubt that the combination of increased carbon dioxide emissions and the acid-rain devastation of forests would mean a considerable worsening of the global warming that appears to have begun.

Realistically, a combination of resources such as coal, oil, natural gas, nuclear power and wood fuel will probably be used to supply these countries with the energy they need, but that does not necessarily make the problem any less serious. Nuclear power entails major safety problems, and wood fuel can easily mean the denuding of forests.

This does not even make any provision for the inevitable population increases in China and India—and population in-

creases are bound to compound the energy problem.

As this simple arithmetic demonstrates, it is virtually impossible for the developing countries' four billion people to use today's technologies to reach the same state of development as now enjoyed in the industrial countries. Conversely, the same arithmetic means that the prosperity enjoyed by the rich, industrial North has been at the expense of the impoverished South.

It is clear that we need new technologies to overcome our energy constraints, to rectify these inequities between North and South, and to achieve peaceful prosperity for all of mankind. We need environmental technologies that can dispose of the sulfur, carbon dioxide and other fuel-exhaust pollutants inexpensively and make nuclear power safer. To expand our energy supplies, we need technologies that can harness nuclear fission, solar energy and a variety of other energy sources. And on the demand side, we need new technologies and greater efforts for energy conservation.

Since the developing countries do not have the capital or scientific resources needed to develop such technologies, countries such as Japan must do everything possible to develop these new technologies and to promote their spread. If this can be done, such efforts will not only benefit the developing countries but will benefit all of mankind, including Japan.

COMING UP

The nations of the Asia-Pacific region have good prospects of achieving well-balanced economic development and contributing to the stabilization of the world economy, provided they enhance cooperation between them and play their respective roles according to their economic strength.

The November/December issue of the *Journal* will focus in its Cover Story item in this issue. Shoichi Akazawa, chairman of the Japan External Trade Organization (JETRO), will give his outlook on likely cooperation, and other reports will show what particular countries are doing to put such cooperation into practice.

Alike in Sympathy

I read with interest "Lest We Forget" by Daizo Kusayanagi in the March/April issue of the *Journal*. He writes, "Whether a person fought against Japan in the Pacific or... in Europe, there were common experiences and feelings that linked us..." I agree entirely and wish to let him know of my own experience, both in teaching and in translating.

Four years ago I published a translation of Mitsuru Yoshida's *Senkan Yamato no Saigo (Requiem for Battleship Yamato)*, University of Washington Press/Kodansha International, 1985). *Senkan Yamato* is one of the few truly great pieces of literature to emerge from World War II in any language, and I have found that thoughtful Americans who read the translation react with deep sympathy. I have had a similar experience with my translations of poems and prose written by survivors of Hiroshima: Tamiki Hara, Yoko Ota, Sankichi Toge and Sadako Kurihara.

On the basis of these experiences I disagree with Kusayanagi's statement that "Japan and America are worlds apart culturally." My own feeling is that we tend to overemphasize the cultural differences and underemphasize the aspects of the cultures that are quite similar; emphasis on cultural differences (or the assumption that such differences are deep) is the first step in creating opposition, not sympathy.

Hence I disagree also with the statement that "the introduction of cultural issues into the Japan-U.S. dialogue creates more confusion and understanding than it resolves." I think that cultural issues are the key to long-term stability in relations between Japan and America. The more both sides can do in supporting, for example, translation projects and other cross-cultural exchanges, the better.

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## New Playing Field

With news of the Japanese per capita income surpassing that of the U.S., the unification of Europe (their 320 million consumers representing a market size almost equal to that of the U.S. and Japan combined) and *perestroika* in the Soviet Union, clearly the winds of change are blowing for the United States.

For us it presents a turning point and a new opportunity. Instead of our playing everyone's rich—and responsible—Uncle, we have an opportunity for the U.S. to play a key role with a team of global leaders. Ideally, this will be a team sport played on a field of peace against want and poverty, of either materials or the spirit. And it will be a game where there are no losers, and petty local interests will not be subverted to the global good.

For the past five years I've worked with over 300 presidential members of the Southern California Technology Executives Network. Our members' issues have increasingly required a heightened familiarization with international trade, since exports have contributed an ever greater share of their revenues. Astute producers throughout the free world will be missing a tremendous marketing opportunity if they do not take the time now to investigate trading with Japan directly, and with the Asian countries to which Japan provides a gateway.

As our information age takes root everywhere and more companies adopt the Mitsui aim of being "accepted as insiders in foreign countries as we perform our multinational functions" (p. 16, March/April 1989 issue), I believe with Naohiro Amaya, as he said in a recent Publisher's Note, "the world [can] realize the ancient dream of a single community" and a "universal culture for all mankind."

Magazines like yours are making this distant dream a closer reality. As a popular song concludes, "It's a small world after all."

Mimi Grant  
Chief Operating Officer  
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## Kaifu Replaces Uno After Election Losses

Toshiki Kaifu, a 58-year-old veteran parliamentarian, was named prime minister on August 9, succeeding Souseki Uno, who resigned to assume responsibility for the ruling Liberal Democratic Party's heavy losses in the July 23 House of Councilors election.

In the Diet's election of the new prime minister, Kaifu garnered 294 votes out of the 487 cast in the House of Representatives, well above the needed majority. But in the House of Councilors, where the LDP had lost its majority, Japan Socialist Party (JSP) Chairwoman Takako Doi was designated as prime minister after two rounds of balloting. It was the first time in 41 years that the two chambers had chosen different people as prime minister.

After a joint committee of both houses failed to reach agreement, nomination of Kaifu as prime minister became final under Article 67 of the Constitution, which provides that in the nomination of prime minister, a House of Representatives decision takes precedence over a House of Councilors decision.

Kaifu became Japan's third prime minister in just three months. Uno was in power only 68 days after taking over from Noboru Takeshita on June 2.

Following his election, Kaifu appointed new top LDP executives and organized his Cabinet the same day. The new 21-member Cabinet included Taro Nakayama, a doctor-turned-politician, as foreign minister and Ryutaro Hashimoto, who served as LDP secretary general in Uno's administration, as finance minis-

ter. Hikaru Matsunaga, a former lawyer, was named minister of international trade and industry.

Two women were appointed to the new Cabinet—Sumiko Takahara, an economic commentator who was not a member of the Diet, as director general of the Economic Planning Agency, and Mayumi Moriyama, a former bureaucrat, as director general of the Environment Agency. (Moriyama was later switched to chief Cabinet secretary.) They are only the fourth and fifth women ever appointed as Cabinet ministers in Japan. Kaifu included two women in his Cabinet apparently in consideration of the growing weight of women voters in the nation's politics, according to political analysts.

Kaifu's appointment as prime minister came the day after he was elected as 14th president of the LDP at a joint caucus of LDP Diet members and local representatives. In the LDP presidential election, Kaifu beat two other candidates, Yoshiro Hayashi and Shintaro Ishihara. The election was arranged to pick a successor to Prime Minister Uno, who declared his intention to resign on July 24.

Kaifu was born on January 2, 1931 to a family running a photo studio near Nagoya. He graduated from Tokyo's Waseda University, the same school as Takeshita. After serving as a secretary of a Diet member, he was first elected to the House of Representatives in 1960 at the age of 29. He has been reelected nine times.

He was a keen debater even when he was in high school. As a member of the Speech Society of Waseda University, he won prizes in various speech contests. He is known as one of the best orators and leading education experts among the cur-

Prime Minister Toshiki Kaifu



Photo: Kyodo News Service

JSP Chairwoman Takako Doi celebrates July's election success.



Photo: Kyodo News Service

minister in 1976-1977 in Takeo Fukuda's Cabinet and in 1985 again as education minister in Yasuhiro Nakasone's Cabinet.

His experience in diplomatic and economic affairs is limited. Kaifu's main task as prime minister is to rebuild the party in the wake of its debacle in the House of Councilors election and lead it to victory in a House of Representatives election scheduled for next summer at the latest, and possibly within this year.

In the July 23 House of Councilors election, the LDP suffered a stunning setback as it lost a majority for the first time. The LDP lost half the 69 seats it had up for election, winning only 36 seats, and its numerical strength was reduced to 109, far below the simple majority of 127 in the second chamber. It remains the largest single party in the upper house, however.

It was the first time that the LDP, continually in power for the past 34 years, had lost its majority in either chamber of the bicameral Diet.

The JSP, the No. 1 opposition party, won 46 seats, more than doubling its 22 seats up for election. With 20 seats not up for election, the JSP's strength was boosted to 66, compared with the pre-election 42.

Among 10 independents who seized seats were six people supported by the JSP. In addition, there were 11 others who secured seats as joint opposition candidates fielded by the country's largest labor organization, Rengo.

Komeito, the No. 2 opposition party, lost two of its 12 seats up for election, winning 10, and its strength fell to 20, down from the preelection 22. The Japan Communist Party (JCP) racked up five seats, falling to 14 from the preelection 17, while the Democratic Socialist Party (DSP) won three seats to decline to eight from the preelection 11.

Up for election in the triennial polls were 126 seats, equal to half the 252 seats in the second chamber, with 76 elected from the 47 electoral constituencies and 50 from a "national constituency" on a proportional representation basis.

The LDP's defeat was attributed to the Recruit stock dealing scandal, in which leading LDP politicians were among those implicated, the unpopular 3% consumption tax and Prime Minister Uno's alleged womanizing. Farmers' discontent with the LDP's farm policy, now oriented

toward liberalization, contributed to the conservative party's defeats in rural districts which used to be its strongholds.

Women made further inroads in the male-dominated world of politics with 22 women elected in the ballot, 11 from the JSP, three from the JCP, and two each from the LDP, Komeito, Rengo and independents. Women now hold 33 seats in the 252-member upper house.

The JSP's Doi, the first woman to lead a major Japanese political party, said women voters were aroused in this election by scandals and unpopular economic policies. Doi's likeable personality, rather than her party's policies, had a big impact on the latest election, political analysts said. ■

## Laser Team Reports Fusion Breakthrough

The Institute of Laser Engineering (ILE) of Osaka University has announced what it says is a world first in using a laser beam to compress fuel pellets or spherical plastic shell targets to a density necessary for causing nuclear fusion.

"Our success well attests to the plausibility of generating nuclear fusion using lasers," the institute said. The team's breakthrough could enable the research institute to take the lead in laser nuclear fusion, Japanese scientists said.

Nuclear fusion is a phenomenon in which two or more relatively light atomic nuclei combine to form a heavier atomic nucleus, releasing a large amount of energy in the process.

Nuclear fusion requires the creation of plasmas, which are generated by stripping atoms of their electrons at high temperature, to leave a uniform mixture of moving charged particles, including both free electrons and atomic nuclei.

The ILE team first aimed at producing a 10-kilojoule laser beam (one joule is equivalent to 0.7375 foot-pounds of energy) at a temperature of 10 million degrees Celsius against plastic shell targets. The targets, consisting of carbon, heavy hydrogen and tritium, had a radius of 0.5 millimeters and a thickness of 10 microns.

The team then added small amounts of silicon in order to measure the neutrons released during the experiment.

Using a newly developed random phase plate device, the team recently succeeded in compressing the plastic shell targets to a density of 600 grams per cubic centimeter, or 600 times denser than the original state. The institute had succeeded in compressing the shell targets to 100 times their original density last year.

Its researchers contend that if a 100-kilojoule laser beam is applied to plastic shell targets with a radius of around three millimeters, nuclear fusion should occur, at least in theory.

To create nuclear fusion, the targets must be compressed to a density radius of 0.3 gram per square centimeter, at a temperature of 100 million degrees. Under such conditions the shell targets would become 500 to 1,000 times denser than the original state.

Sadao Nakai, director of the institute, said of the successful compression experiment, "It is the largest step forward toward our goal so far." He added, "We have already generated a temperature of 100 million degrees. The next thing to do is to build a laser system that can produce more powerful beams to achieve the temperature and the density simultaneously."

One senior researcher at the institute said, "I think we can achieve nuclear fusion in five to six years." ■

The Gekko XII glass laser system, which has a total energy production capability of 30kJ per pulse

