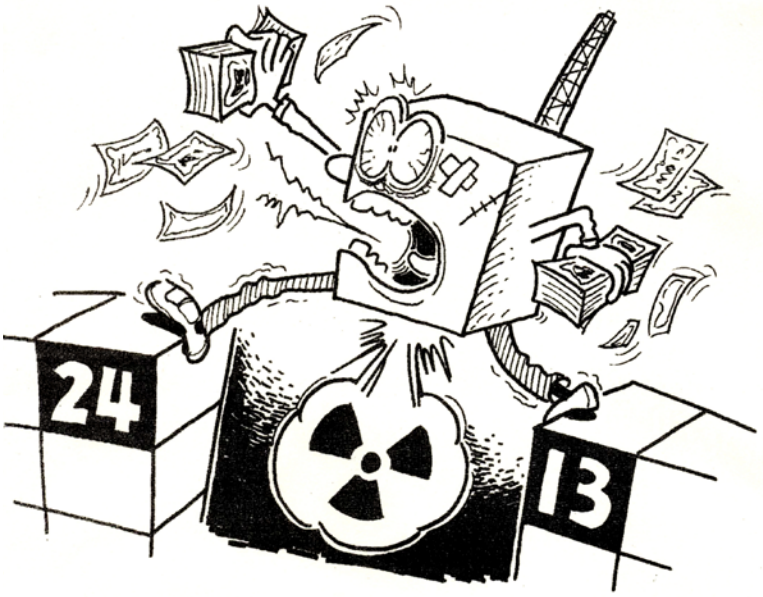
NUKE INFO TOKYO

Jan./Feb. 2008
No. 122

Citizens' Nuclear Information Center

Akebonobashi Co-op 2F-B, 8-5 Sumiyoshi-cho, Shinjuku-ku,
Tokyo 162-0065, JAPAN Phone: +81 3 3357 3800 Fax: +81 3 3357 3801
URL: http://cnic.jp/english/ e-mail : cnic@nifty.com

Extension of Time Allowed Between Periodic Inspections of Reactors



Cartoon By Shoji Takagi

From April 2008, the time permitted before reactors are shut down for periodic inspections will be extended (long-cycle operation). Under the Electricity Utility Law regulations as they now stand, the maximum time allowed between the end of one periodic inspection and the commencement of the next is 13 months. However, from April there will be three categories, determined on the basis of an assessment of the performance of each plant. Depending on the category, the maximum time will be 13 months, 18 months or 24 months.

It is claimed that categorization will be carried out cautiously. At first all plants will be allocated to the 13-month category and only gradually progress to the 18-month and 24-month categories. Also, even if a plant is assessed worthy of the 24-month category, it will not be able to advance there immediately without first progressing through the 18-month category. It will only be able to advance to the 24-month category after establishing a record of satisfactory performance in the 18-month category.

That said, the assumption is that the next generation plants currently being developed will all run for 24 months between inspections and probably the aim of the Nuclear and Industrial Safety Agency (NISA) and the utilities is to eventually allow all plants to operate for 24 months between inspections.

Since Autumn 2007, meetings have been held in regions which host nuclear power plants to explain the system to the regional and local governments and to the general public. However, at all these meetings there have been opposing voices and expressions of mistrust towards NISA's one-way explanations, the purpose of which was to enable NISA to claim that it had obtained stakeholder understanding before imposing the new system. Naturally, everyone is skeptical after the fatal Mihama-3 accident (2004, NIT 102), the discovery of numerous cover-ups and instances of data manipulation (2007, NIT 117), and the problems at the Kashiwazaki-Kariwa nuclear power plant resulting from the Chuetsu-Oki

Contents

Extension of tme between periodic checks	1-2
Rokkasho: problems with vitrification	3
K-K: some things becoming clearer	4
Asian Nuclear Power Plants	5
Maps of Nuclear Facilities in Asia	6-7
US-India Nuclear Deal	8-9
Group Intro.: Daichi Stop Nuclear Power	10
News Watch	11,12

Earthquake (2007, NIT 119). They wonder why now of all times, when such problems of safety and quality control have arisen, should the time between periodic inspections be extended. NISA asserts that it can carry out efficient and effective inspections, but the host regions see this as nothing but willful contempt for safety.

The mass media has pointed out that the reason why the system is being introduced is, quite simply, economics. They say, "The electric power industry has long demanded this as a 'trump card' for reducing costs" and "If shrinking the time that plants are shut down can increase the capacity factor by one point, Tokyo Electric's profits will rise 11.5 billion yen, while Kansai Electric's profits will rise 6.4 billion yen."

NISA says that because the bulk of worker exposure to radiation occurs during periodic inspections, the new system will lead to a reduction in such exposure. There are other ways in which worker exposure should be reduced, but there are concerns that long-cycle operation will actually increase exposure, as a result of the increased concentration of corroded substances which have become radioactive.

NISA bases its claim that safety can be maintained under long-cycle operation on the absence of any observed increase in shutdowns from equipment failure during the experience of long-cycle operation in America and France. However, this experience is very limited. NISA's explanatory documents acknowledge a maximum of 30 months between periodic inspections in America. From 2002 to 2004 the maximum was 26 months, while the average was 18.8 months. In France there are two categories, 12 months and 18 months. The longest time between periodic inspections was 23 months, but the average was only 12.8 months, which is actually less than the Japanese average of 13.6 months. The longest time between periodic inspections in Japan was 16 months. (See the note below for an explanation of the apparent inconsistency between actual maximum and average time between inspections and maximum permitted time[1].)

Including pre-2001 and post-2005 experience, the record only amounts to about 10 years. At the meeting of the Advisory Committee for Natural Resources and Energy (an advisory agency to the Minister of Economy, Trade and Industry) where the decision to introduce the system was made, one of the committee members pointed out that "In France too, when the time between periodic inspections was extended, there were detailed discussions between the utilities and the regulatory body. Based on those discussions, it was accepted only for those plant design types for which it was confirmed to be technically appropriate".

To extend the time between periodic inspections in the absence of sufficient data, while at the same time ignoring the concerns of the local people is imprudent to say the least. Perhaps it would be better to call it reckless.

Baku Nishio (CNIC Co-Director)

1. According to IAEA's PRIS database, these times include adjustment operation time during periodic inspections. This explains why actual maximum and average times exceed the maximum time allowed in Japan. The French figures can be explained by the fact that the 12-month and 18-month categories are not legally binding.

Continued from page 3 As a consequence of this problem, another problem arose. Due to the fact that the glass vitrification process did not proceed as planned, more high-level liquid waste was required to complete Step 4 of the active tests. Therefore, at the beginning of January 2008, JNFL went ahead and sheared 30 tons of spent BWR fuel scheduled for Step 5 of the active tests. This obviously means that not enough glass canisters have been produced to satisfy the requirements of Step 4. It could also mean that a very large quantity of molten glass that did not reach the stainless steel containers was scraped out from the melting furnace.

For the glass vitrification function during Step 4, the Nuclear Industrial Safety Agency requires that "JNFL confirm that the two melting furnaces, A and B, have the capacity to process 70 liters per hour." However, the reality is that it will take some time to confirm this. Step 4 still has not been completed and during Step 5 a further 160 tons of spent BWR fuel is scheduled to be sheared. All the reports say that it is now impossible to begin full operation of the Rokkasho Reprocessing Plant by the end of February 2008, but JNFL is yet to concede this.

By Masako Sawai (CNIC)

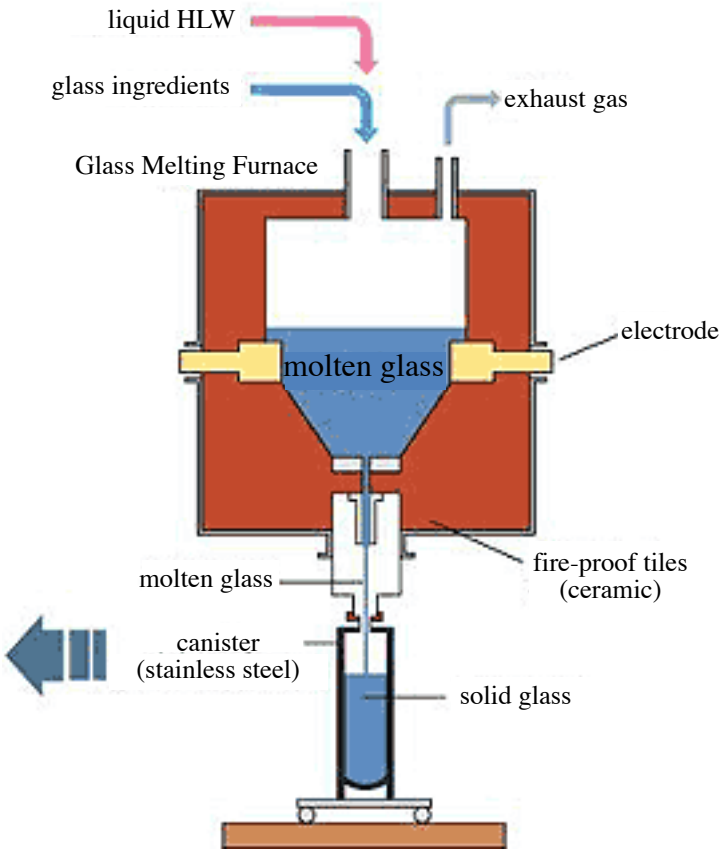
Rokkasho Reprocessing Plant
Problems with Vitrification Process
Full operation won't begin as scheduled in February 2008

Tests of the Rokkasho Reprocessing Plant using spent nuclear fuel (active tests) commenced in March 2006. Production of plutonium began in November of the same year and 3,283 kilograms of MOX powder (50-50 mixture of plutonium oxide and uranium oxide) had been stored at the plant by November 2007. Production of high-level radioactive waste (HLW) glass canisters began in November 2007, but it is now clear that the process is not going smoothly.

The vitrification process employed at Rokkasho is different from the rotary kiln process used at the reprocessing plants at La Hague (France) and Sellafield (UK). At Rokkasho the Liquid Fed Ceramic Melter (LFCM) method developed at the Tokai Reprocessing Facility is used.

The Tokai Reprocessing Facility commenced operations in 1977, but the vitrification facility did not begin operating until 1995. In the LFCM method, high-level liquid waste and glass ingredients are mixed in a high-temperature melting furnace made of fire-proof ceramic tiles. The mixture is then poured into stainless steel containers, where it cools to form glass canisters. The melting furnace is designed so that the molten glass flows down a slope into the stainless steel containers (see diagram). There is a flow nozzle at the bottom end of this slope.

High-Level Waste Processing Equipment (Glass Melting Furnace)



The temperature inside the furnace is supposed to be maintained at 1,100 to 1,200 degrees C. However, due to difficulties with temperature control, there were frequent problems with increased viscosity and accumulation of radioactive platinum group metals at the bottom of the furnace. In response, design changes and modifications were carried out and a modified melting furnace was introduced from 2002 to 2004. The Tokai facility only managed to produce 244 glass canisters in 12 years to 2007.

While this technical development was being carried out at Tokai, construction of the Rokkasho Reprocessing Plant had already commenced in 1993. Whenever design changes and modifications were made due to problems and accidents at the Tokai facility, design changes had to be made to the glass vitrification facility under construction at Rokkasho. The reality is that the glass vitrification technology employed at Rokkasho is still under development.

There are two melting furnaces, each with a theoretical capacity to process 70 liters of liquid waste per hour, installed at the glass vitrification facility at Rokkasho. However, as pointed out in the Denki Shimbun Newspaper, "To date, it cannot not necessarily be said that this is a stable situation." At the end of December Japan Nuclear Fuel Ltd. (JNFL) announced, "Due to increased viscosity of the molten glass and a doubling of the time required for the glass to flow down" (without resting for a single day during Japan's main holiday period) "from December 27th we will clean out the molten glass in the melting furnace." (Quoted from JNFL's web site.) The net result is that only 21 glass canisters have been produced so far at the Rokkasho Reprocessing Plant.

Continued on page 2

Kashiwazaki-Kariwa:
some things becoming clearer

In the six months since the Chuetsu-Oki Earthquake, several things which were hazy at first have become clearer. For example, the stance of Niigata Prefecture is clearer than it was before.

(1) Length of the fault

For the earthquake resistance design of the Kashiwazaki-Kariwa (K-K) nuclear power plant (based on the old guidelines) estimates were made of the length of the active faults in the vicinity of the plant, the magnitude of the earthquake if these faults were to shift and the seismic acceleration for the "maximum design earthquake" (S1) and "extreme design earthquake" (S2). However, as explained in NIT 121, the measured seismic acceleration far exceeded even the S2 estimate.

When applying for permission to construct K-K, in regard to the region of the seabed where the Chuetsu-Oki Earthquake occurred, the Tokyo Electric Power Company (TEPCO) informed the government that there were no prominent active faults. The government's safety assessors accepted this judgment. However, when a team of geomorphologists reanalyzed the sonic testing data in the original application, they found that, even considering the level of scientific understanding at the time, it was clear that there was a fault exceeding 20 kilometers on the seabed. For the whole seabed the fault was 30 ~ 50 kilometers long, so an earthquake exceeding magnitude 7.3 could occur. On December 5, shortly after the team announced its findings, TEPCO acknowledged the existence of a 23-kilometer fault. In fact, TEPCO had reassessed the length of the fault and reported to the Nuclear Industrial and Safety Agency (NISA) in 2003 that the original figure was an under-estimate. They must have realized that the seismic acceleration might also be an underestimate, but neither TEPCO nor NISA disclosed this failure of the safety assessment system. As things have turned out, however, it is public knowledge now.

(2) Predictable earthquake

There was considerable debate about the fault surface that caused the Chuetsu-Oki Earthquake. No consensus had emerged, but on December 11 the government's Earthquake Research Committee (within the Headquarters for Earthquake Research Promotion) handed down its conclusion. It found that the fault surface was 27 kilometers long and sloped south-east. The Committee also found a 10-kilometer north-west sloping fault surface that intersected the other fault in an X shape. The head of the survey team stated that had a detailed survey had been carried out it would have been possible to predict the earthquake, so the slipshod nature of the survey carried out by TEPCO and the government's safety assessors is plain for all to see.

(3) Niigata Prefecture's Stance

Niigata Prefecture, which is lumbered with the problem of what to do about the K-K nuclear power plant, set up a committee to develop a vision for recovery from the earthquake. The committee released its vision on December 27. It identified the high dependence of the affected region on the K-K nuclear power plant and the considerable loss of tax revenue and employment that this entails, due to the fact that it will be difficult to restart the plant in the short term. It recommended that dependence on the nuclear power plant be reduced and presented two scenarios, one assuming that the plant will be restarted and one assuming that it will not be restarted.

This is the first time in Japan that an official document has canvassed the possibility of closing down a nuclear power plant. Since the September session of the prefectural assembly, the governor has not changed his position, saying, "[The situation] is under review. Depending on the outcome of the review, it is possible that the plant will be closed down." Also, Niigata Prefecture is strengthening its own technical committee and, rather than swallowing whatever the central government says, it intends to make its own judgments.

For its part, the central government has invited the IAEA to send a second investigation team. Twelve people will visit Japan from January 28 to February 1. Then on February 26 & 27, nuclear energy proponents who hope

Continued on page 12

Asian Nuclear Power Plants

Current Status and Future Plans

The maps on pages 6 and 7 show nuclear power plants in Japan and the rest of East Asia and nuclear facilities in Japan only. The maps are current for January 2008. No changes have been made to the Japanese maps since January 2007 (NIT 116). However, there are several changes and additions to the map of East Asian nuclear power plants.

In China during 2007, Tianwan 2 (1000 MW, PWR-VVER) was connected to the grid on May 14 and began commercial operation on August 16. Tianwan 1 (1000 MW(e), PWR-VVER) was connected to the grid in 2006, but began commercial operation in June 2007. Construction of Qinshan II-4 (610 MW, PWR) began on January 28 and construction of Hongyanhe 1 (1000 MW, PWR) began on August 18.

In South Korea, construction of Shin-Kori 2 (960 MW, PWR) began on June 5 and construction of Shin-Wolsong 1 (960 MW, PWR) began on November 20. Ground was broken on November 28 for the construction of Shin Kori-3 and Shin Kori-4 (both APR-1400s).

Most of China's "planned" nuclear power plants have been on the books for some time, but China's plans are subject to abrupt change, so we have not previously included most of them on this map. If we tried to show all the proposed sites in China, we would have to redo the map completely, so we have only included those planned for the near future.

The Taishan site is a new site, but a contract for 2 EPRs (1700 MW each) was signed with Areva on November 26, so we assume they are serious about building a nuclear power plant there. Earlier in the year, an agreement with Westinghouse to build two AP1000s each at Sanmen and Yangjiang was changed suddenly. The plan is now for Westinghouse to build plants at Sanmen and Haiyang and for China Guangdong Nuclear Power Company to build CPR-1000s at Yangjiang.

Besides these, an agreement was signed on November 6 with Atomstroyexport for two more VVERs at Tianwan and site preparation began at Fiangjiashan, so it appears that China's nuclear plan is moving ahead in earnest. However, it remains to be seen whether China will realize its aim of increasing nuclear capacity fivefold to 40 GW by 2020 and a further three to fourfold to 120-160 GW by 2030.

For South Korea, besides construction of the new and planned plants shown on page 7, life extensions for old plants is a major issue. On 17 January 2008 the oldest plant, Kori-1, went back on line with a life extension of 10 years. Wolsong-1, which began operating in 1982, is the next in line for a life extension.

Japan, China, Taiwan and South Korea are the only countries with nuclear power plants in East Asia. (In South Asia, India and Pakistan have nuclear power plants (see article on page 8).) However, several countries in South-East Asia have plans at varying stages of development. The most notable are outlined below.

On August 29 it was announced that Vietnam Prime Minister Nguyen Tan Dung had endorsed a plan for 2-3 nuclear power plants with a total capacity of 8,000 MW to be built by 2025. A decision on construction of the first plant is not expected until 2008.

In Indonesia, due to domestic opposition (see NIT 119 , 120), not to mention the aftershock from the earthquake at Kashiwazaki-Kariwa, it now seems certain that the plan to build four 1,000 MW reactors on the Muria Peninsula in Central Java will be delayed. Indonesia planned to call tenders by 2008 and begin construction in 2010, but in the absence of a presidential decision the plan cannot proceed.

This year Thailand announced a plan to begin operating the first two of four 1,000-MW reactors by 2020 and a second pair in 2021. No site has yet been selected.

Philip White (NIT Editor)

Haiku for the season

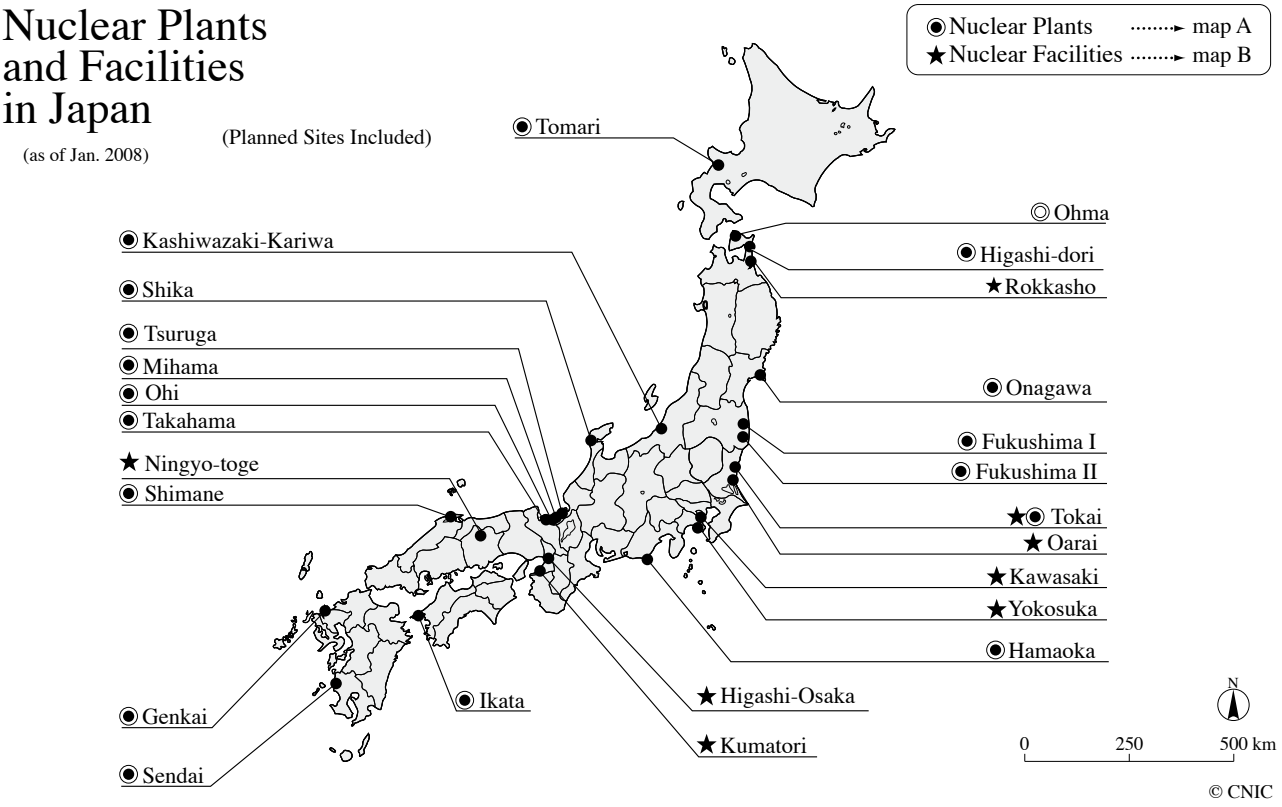
Narcissus
Tilting its head
In mourning

By Emiko Kamiya

Nuclear Plants and Facilities in Japan

(as of Jan. 2008)

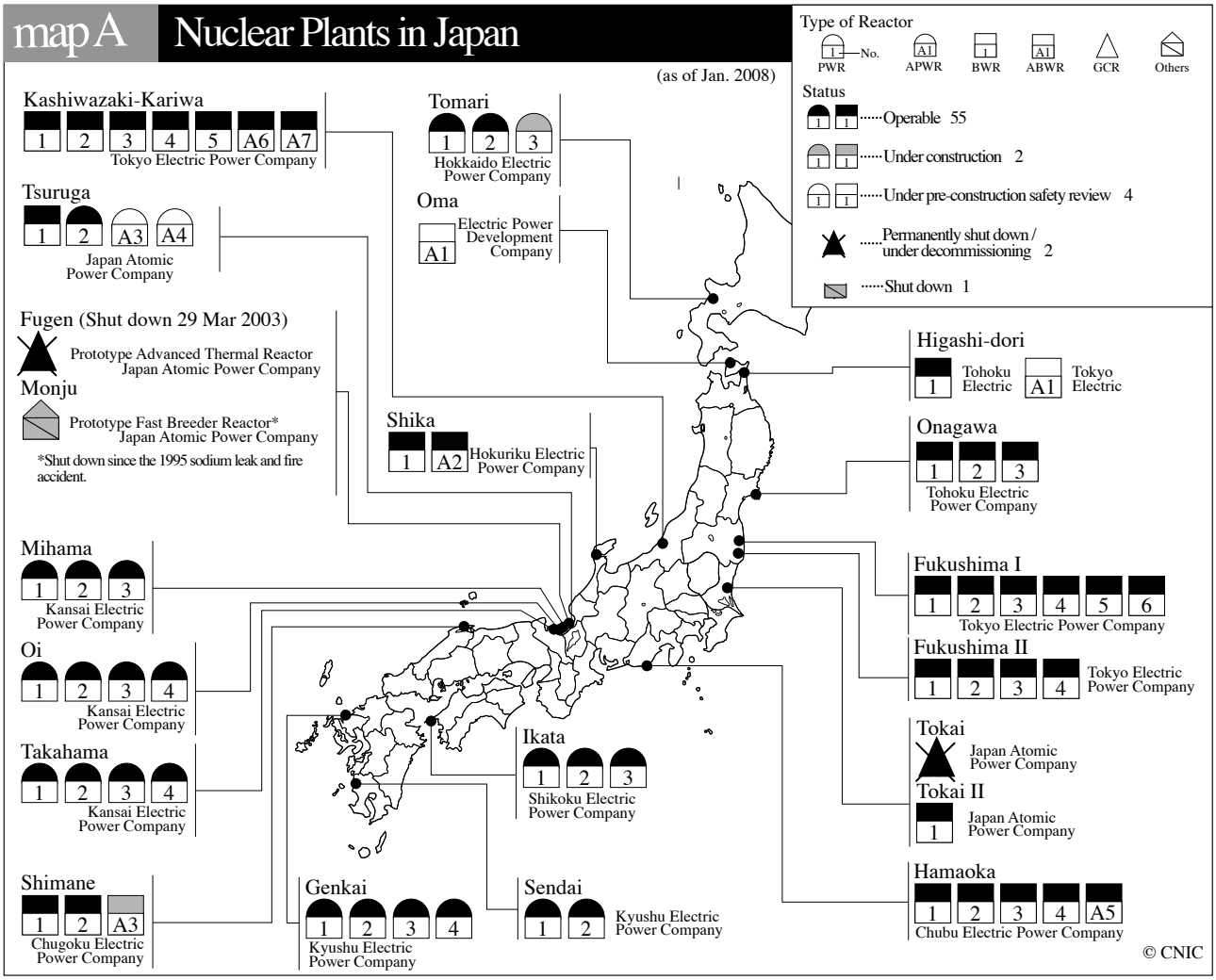
(Planned Sites Included)



© CNIC

map A Nuclear Plants in Japan

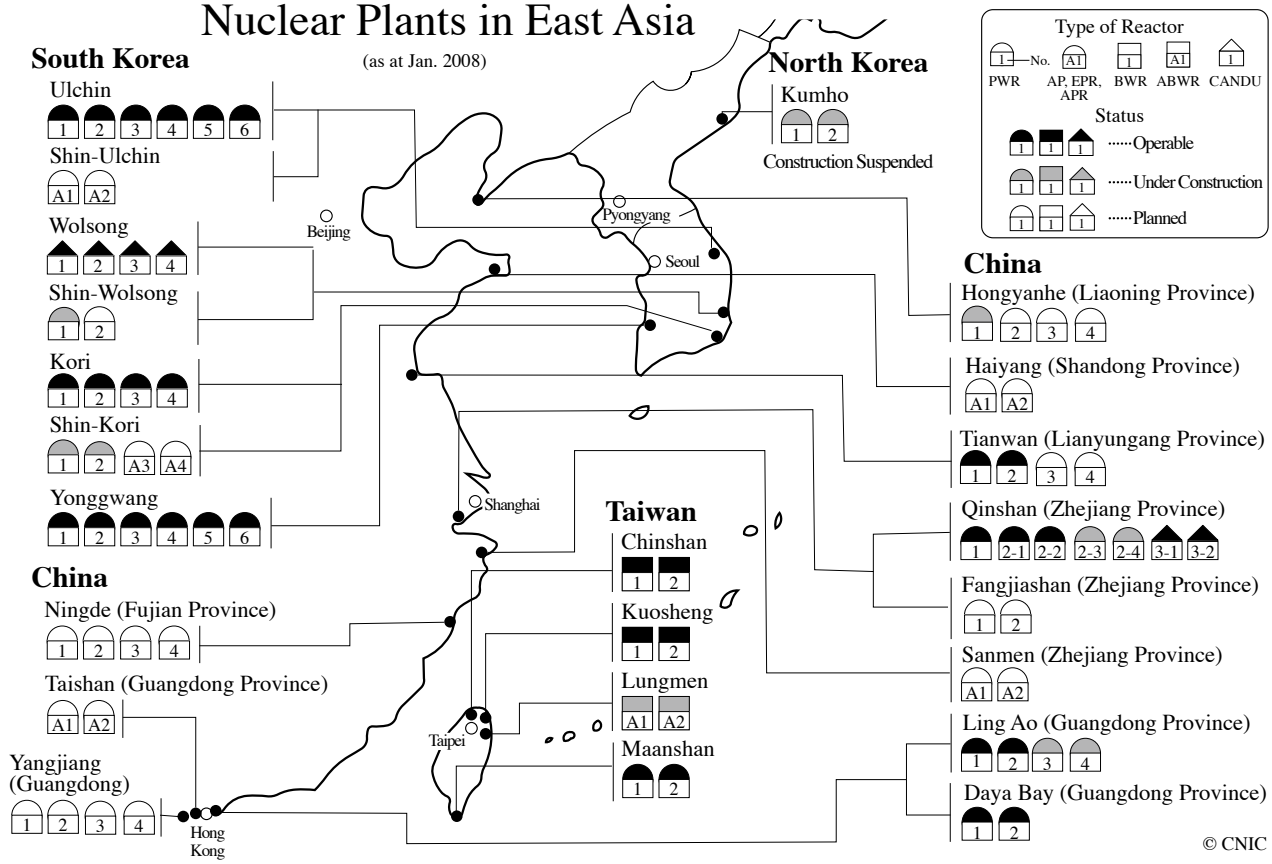
(as of Jan. 2008)



© CNIC

Nuclear Plants in East Asia

(as at Jan. 2008)



© CNIC

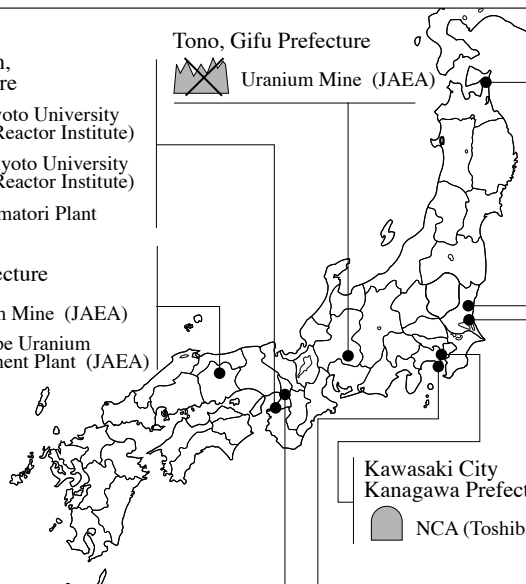
map B Commercial and Research Nuclear Facilities in Japan

(as of Jan. 2008)

Type of Facility
- Research reactor (CA = Critical Assembly)
- Uranium fuel manufacturing plant for BWR
- Uranium fuel manufacturing plant for PWR
- MOX fuel manufacturing plant
- Uranium reconversion
- Uranium enrichment plant
- Reprocessing plant
- Mine
- Others

Status
- Operable
- Under construction
- Permanently shut down

GNF-Japan - Global Nuclear Fuel - Japan
JAERI - Japan Atomic Energy Research Institute
JNC - Japan Nuclear Cycle Development Institute
JNFL - Japan Nuclear Fuel Ltd.
NFI - Nuclear Fuel Industry



Kumatori Town, Osaka Prefecture
- KUR (Kyoto University Research Reactor Institute)
- KUCA (Kyoto University Research Reactor Institute)
- P NFI Kumatori Plant

Ningyo-toge, Okayama Prefecture
- Uranium Mine (JAEA)
- Prototype Uranium Enrichment Plant (JAEA)

Tono, Gifu Prefecture
- Uranium Mine (JAEA)

Kawasaki City Kanagawa Prefecture
- NCA (Toshiba)

Yokosuka City Kanagawa Prefecture
- B GNF-Japan

Higashi-Osaka City, Osaka Prefecture
- UTR (Kinki University)

Rokkasho Village, Aomori Prefecture
- Reprocessing Plant (JNFL)
- Uranium Enrichment Plant (JNFL)
- Low-level Radioactive Waste Disposal Center (JNFL)
- High-level Radioactive Waste Storage Center (JNFL)

Tokai Village, Ibaraki Prefecture
- Mitsubishi Nuclear Fuel
- P Mitsubishi Nuclear Fuel
- JCO Tokai Plant
- B NFI Tokai Plant
- Mox Plutonium Fuel Production Facility (JAEA)
- Reprocessing Plant (JAEA)
- Vitrification Facility (JAEA)
- JRR-3 (JAEA)
- TCA (JAEA)
- JRR-4 (JAEA)
- FCA (JAEA)
- NSRR (JAEA)
- TRACY (JAEA)
- Yayoi (Tokyo University)
- STACY (JAEA)

Oarai Town, Ibaraki Prefecture
- HTTR (JAEA)
- JMTR (JAEA)
- Joyo Experimental Fast Reactor (JAEA)

© CNIC

Experts and NGOs Criticize US-India Nuclear Deal

Besides those shown in the map on pages 6 and 7, there are nuclear power plants in two other countries in Asia. These plants are located in India and Pakistan. India has 17 operational power reactors with a gross capacity of 4,120 MWe, while Pakistan has 2 operating power reactors with a gross capacity of 462 MWe. The reason for the low generating capacity for so many reactors in India is that most of them are Indian-designed heavy water reactors with a capacity in the order of only 200 MWe.

India, in particular, has ambitions of greatly increasing its nuclear generating capacity. Five reactors (not counting FBRs) are currently under construction. These will add 2,660 MWe, increasing the gross capacity to 6,780 MWe. India plans to further increase this to 20,000 MWe by the year 2020. However, this plan is highly problematic, because it depends on imported light water reactors and imported nuclear fuel. Modern light water reactors have much larger capacities than India's heavy water reactors and use uranium more efficiently, but current international arrangements ban exports of nuclear technology and fuel to both India and Pakistan.

As mentioned in previous issues of NIT, CNIC is actively involved in an international campaign opposing a deal between India and the US which would grant India a special exemption from US laws and longstanding global nuclear trade standards. As coordinator of the Abolition 2000 US-India Deal Working Group, over a period of a month including Christmas and the New Year, CNIC helped take the campaign to a new level. In a letter sent to more than four-dozen governments in the second week of January, a broad array of more than 130 experts and nongovernmental organizations from 24 countries said the US-India deal "would damage the already fragile nuclear nonproliferation system and set back efforts to achieve universal nuclear disarmament."

Among the individuals endorsing the appeal were Tadatoshi Akiba (Mayor of Hiroshima), Tomihisa Taue (Mayor of Nagasaki), Jayantha Dhanapala (former UN Under-Secretary General for Disarmament Affairs and President of the 1995 Nuclear Nonproliferation Treaty Review and Extension Conference), Douglas Roche (former Canadian Ambassador for Disarmament) and Noam Chomsky (Massachusetts Institute of Technology). Six international NGOs and national and local NGOs from South Asia, East Asia, Australia and New Zealand, Europe, Africa, and North America endorsed the letter.

The reason why this sign-on letter was organized at such a difficult time of year was that the 35-member International Atomic Energy Agency (IAEA) Board of Governors and the 45-member Nuclear Suppliers Group (NSG) are expected to take up the issue early in 2008. The international appeal called upon governments represented on these bodies "to play an active role in supporting measures that would ensure this controversial proposal does not: further undermine the nuclear safeguards system and efforts to prevent the proliferation of technologies that may be used to produce nuclear bomb material," or "in any way contribute to the expansion of India's nuclear arsenal."

Current international guidelines severely restrict trade with states, such as India and Pakistan, that do not allow comprehensive international safeguards over all nuclear facilities and material in their territory. The 1968 nuclear Nonproliferation Treaty (NPT) bars direct or indirect assistance of another state's nuclear weapons program. India and Pakistan, which conducted nuclear weapons tests in 1998, have not joined the NPT, continue to produce fissile material for nuclear weapons, and have not signed the Comprehensive Nuclear Test Ban Treaty (CTBT). India also detonated a nuclear bomb in 1974 made with plutonium harvested from a Canadian and U.S.-supplied reactor in violation of bilateral peace nuclear use agreements.

"Contrary to the claims of its advocates," the signatories wrote, "the proposed arrangement fails to bring India into conformity with the nonproliferation behavior expected of other states. India's commitments under the current terms of the proposed arrangement do not justify making far-reaching exceptions to international nonproliferation rules and norms."

Noting that the IAEA Board and the NSG traditionally operate by consensus, the signatories

stressed that each member state "has a pivotal role to play." No doubt many of the signatories believe the deal is irredeemably bad, but the drafters chose to limit the appeal to a demand for conditions and restrictions on nuclear trade with India. The appeal sought to provide governments which are genuinely concerned about the deal with demands that they should make during negotiations in the NSG and the IAEA Board of Governors.

Among other recommendations, the appeal urged governments "to actively oppose any arrangement that would give India any special safeguards exemptions or would in any way be inconsistent with the principle of permanent safeguards over all nuclear materials and facilities." India is reportedly seeking IAEA safeguards that could allow it to cease IAEA scrutiny if nuclear fuel supplies are cut off - even it that is because it renews nuclear testing.

The appeal insisted that NSG states "should under no circumstances" allow for the transfer to India of plutonium reprocessing, uranium enrichment or heavy water production technology, which may be replicated and used to help produce nuclear bomb material. India is seeking access to these sensitive technologies from the United States and other suppliers.

Noting that the nuclear cooperation proposal could help India expand its nuclear weapons arsenal, the appeal also urged governments to insist that India "join the original nuclear weapon states by declaring it has stopped fissile material production for weapons purposes and ... make a legally-binding commitment to permanently end nuclear testing."

The appeal argued that "in the very least," NSG states should "clarify that all nuclear trade shall immediately cease if India resumes nuclear testing for any reason." To do otherwise "would undercut the international norm against nuclear testing and make a mockery of NSG guidelines," according to the supporters of the appeal.

The campaign against the US-India nuclear deal has focused principally on issues of non-proliferation and nuclear disarmament, but there is also a great deal at stake for the nuclear power industry. The nuclear industry has high hopes that India will help it realize its much-vaunted "nuclear renaissance". Even if India clears the immediate hurdle of securing international approval to import nuclear technology and fuel, it should not be assumed that it will achieve its ambition of 20,000 MWe nuclear generation by 2020, but there will be no sales if the US-India deal falls through.

The Japanese government, as one of the principal cheerleaders for nuclear power, finds itself in a bind. The experience of Hiroshima and Nagasaki makes it difficult for the government to ignore the flagrant double standard that granting a unique exemption for India would represent. However, because of its unwavering belief in nuclear power, it is searching for ways to enable India to expand its nuclear power program. Since no convincing formula can be found, in the end the government will be forced to make a choice. It will suffer a serious loss of credibility if it chooses to sacrifice its long-held disarmament and non-proliferation principles for the dubious benefits of a "nuclear renaissance".

By Philip White (NIT Editor)

*This article borrows heavily from a press release prepared by the Washington-based Arms Control Association and jointly released with CNIC on January 9. The full letter and list of signatories can be found on the following web site:
http://cnic.jp/english/topics/plutonium/proliferation/usindiafiles/nsgiaea7jan08.html

Handing the letter to the Foreign Ministry (Photo by Kayo Ikeda)

Group Introduction

Daichi Stop Nuclear Power Committee

by Kyoko Noguchi*

"Rather than shout a thousand times about the dangers of agricultural chemicals, it is better to start by growing, delivering and eating one organic radish." Daichi-Wo-Mamoru-Kai (Association to Preserve the Earth) began with this slogan in 1975. Daichi focuses on the connection between food and the natural environment. Its philosophy is to make safe food widely available in society and to promote organic agriculture. It is comprised of 82,000 consumer household members (mainly in the region around Tokyo), 2,500 producer members throughout Japan, and its offices. Its head office is located in Tokyo's Minato Ward.

Daichi takes on many issues, including genetic modification and school lunches. Recently the "One Million People Candle Night" and the "Food Mileage" campaigns have been hugely successful. The Candle Night campaign calls on people to turn off their lights from 8pm to 10pm on the night of the summer solstice and spend a quiet time by candlelight. Events are held around Japan, in cooperation with other groups. The Food Mileage Campaign aims to reduce as much as possible the distance that food is transported from producers to consumers and in so doing to reduce the CO2 emitted. It also helps to protect primary industry.

Daichi issued a statement opposing nuclear energy in 1986, the year of the Chernobyl accident. After the accident, radioactivity was carried in the atmosphere to Japan and small quantities were detected in Daichi's vegetables, tealeaves, milk, etc. There was discussion about whether or not we should eat vegetables in which radioactivity was detected, but no conclusion was reached. In producing safe vegetables, Daichi's growers give great consideration to the natural environment. They are extremely careful not to use insecticides or herbicides, but when radioactivity falls from the sky, what are they to do? Since then, Daichi has opposed nuclear energy declaring, "Nuclear energy is incompatible with organic agriculture, which places importance on life." Daichi also established an expert committee within the association. The committee's name translates as "Daichi Stop Nuclear Power Committee".

Farmer, Mikio Shimaoka, speaking at a meeting organized by Daichi Stop Nuclear Power Committee. He played a key role in stopping the Kubokawa nuclear power plant plan.

Daichi Stop Nuclear Power Committee's main activities are: dissemination of information to members promoting a nuclear energy phase out; exchanges and solidarity actions with people in regions with nuclear facilities; participation in the "Stop Nuclear Power! Tokyo Network" (network of groups in the Tokyo region calling for a nuclear phase-out) and "Stop Reprocessing: Assembly of Citizens in the Region of the Capital" (network working to prevent full operation of the Rokkasho Reprocessing Plant). In addition, from the perspective of food safety, together with organizations including the Japanese Consumers' Cooperative Union, Daichi established the "National Network to Oppose the Rokkasho Reprocessing Plant and Prevent Radioactive Contamination". This network is running a national signature campaign and lobbying politicians. In future we hope to join with large numbers of people to create a society which is free of nuclear power and which places importance on livelihoods and life.

*Kyoko Noguchi is a Board Member representing Daichi consumers.

NEWS WATCH

2008 Nuclear Energy Budget

On 27 December 2007the Atomic Energy Commission settled the draft 2008 budget for nuclear energy related matters. At 451.6 billion yen, it is 2% less than the previous year. 264.1 billion yen (58%) is allocated to the Ministry of Education, Culture, Sports, Science and Technology. The majority of that goes to the Japan Atomic Energy Agency. 179.5 billion yen (40%) is allocated to the Ministry of Economy Trade and Industry, most of which is for subsidies to regions which host nuclear facilities. The remaining 2% is divided up between the Ministry of Foreign Affairs, the Cabinet Office and so on.

39.7 billion yen is allocated to the fast breeder reactor (FBR) cycle. Of that, 18.1 billion yen is for development of the Monju Prototype FBR. Over 1 billion yen was cut from the previous year's budget, because modification work on the reactor has been completed. The majority is for electric power to heat the molten sodium to prevent it from solidifying. Besides this, a fund has been established to promote research and development for the FBR cycle and subsidies worth 1.1 billion yen and 0.4 billion yen respectively are allocated for the regions where Monju and the Joyo Experimental FBR are located.

19.3 billion yen is allocated for nuclear fusion. At 10.3 billion yen, the budget for ITER is about double the previous year. Of this, 4.7 billion is for the main ITER facility to be built in France, while 5.6 billion is for the so-called "broad approach", including facilities to be built in Rokkasho Village in Aomori Prefecture.

Kazakhstan to carry out re-conversion for Kansai Electric

On 26 December 2007, Kansai Electric Power Company (KEPCO), Sumitomo Corporation and Nuclear Fuel Industries signed a memorandum of understanding with Kazatomprom to carry out uranium re-conversion (post-enrichment conversion of UF6 to UO2) in Kazakhstan. An official contract will be signed after confirmation of the technical capability of the Kazatomprom-owned Ulba Metallurgical Plant. The plan is to begin reconversion around 2010.

It is difficult to operate the Ulba Metallurgical Plant on a commercial basis, because it uses Soviet era methods. The Japanese companies therefore intend to provide technology to modify the plant and to invest around 70-80 billion yen in these modifications.

They are also considering expanding the business to include fabrication of the reconverted uranium into nuclear fuel. In that case the investment would be in the order of several 100 billion yen. Apparently there are even thoughts of taking uranium recovered from reprocessed spent fuel, converting and enriching it in Russia and France, reconverting and fabricating it into new fuel in Kazakhstan, then exporting it to a third country, thus bypassing Japan completely.

Also, in January 2006 KEPCO and Sumitomo became involved in a Kazatomprom project to develop new uranium mines in Kazakhstan.

HLW dump site selection schedule extended

On 18 December 2007, the subcommittee of the Agency for Natural Resources and Energy dealing with radioactive waste called for public comments on a draft to amend the plan for a final repository for high-level radioactive waste (HLW). The draft included an alteration to the schedule for selection of a HLW dump site.

Public invitations to site a HLW dump began in December 2002, but so far document studies haven't begun for any site (see previous News Watches). The selection process involves document studies, followed by outline studies, followed by detailed studies. The new draft does not change the plan to select sites for outline studies in 2008, but selection of sites for detailed studies and final selection are delayed by "a few years". However, the plan stubbornly sticks to a date of around 2037 for commencement of disposal, cutting the time allocated for the studies

and construction. Selection of a site for outline studies in 2008 is patently impossible and the schedule as a whole is probably unrealistic as well.

FNCA issues statement calling for nuclear be accepted as CDM

On 18 December 2007, the Japan-led Forum for Nuclear Cooperation in Asia (FNCA) held a ministerial meeting in Tokyo. Besides Japan, the meeting was attended by the ministers responsible for nuclear energy from Australia, Bangladesh, China, Indonesia, South Korea, Malaysia, The Philippines, Thailand and Vietnam.

The joint communique signed by delegation leaders of nine countries proclaimed the efficacy of nuclear energy as a response to global warming and called for it to be accepted as a Clean Development Mechanism (CDM). Australia did not sign the communique, because of policy deliberations after the change of government.

Plan for second reprocessing plant "downgrades" reprocessing to development stage

The "Five-party Council on Smooth Transition to a Fast Breeder Reactor Demonstration. Process" (Five-party Council) is comprised of the Ministry of Education Culture Sports Science and Technology, the Ministry of Economy Trade and Industry, the Federation of Electric Power Companies, the Japan Electrical Manufacturers' Association and the Japan Atomic Energy Agency. On 11 December 2007 it reported to the Atomic Energy Commission on the status of preliminary considerations concerning the second reprocessing plant. Formal consideration of the second reprocessing plant is scheduled to begin around 2010. Besides designating the Japan Atomic Energy Agency as the core agency, the Five-party Council said that it would promote links with AREVA.

Reprocessing was supposed to have become commercial with the Rokkasho Reprocessing Plant, but in this report reprocessing is "downgraded" to development status so that it can be subsidized with taxpayer money. Foreign technology is needed because of insufficient investment by the Japanese electrical power industry, which, if it spoke its mind honestly, would say that demonstration of the fast breeder reactor cycle is futile.

ATMEA launched

On 7 December 2007, Mitsubishi Heavy Industries and AREVA launched the jointly owned company ATMEA to develop and market the 1,100 MW ATMEA-1 nuclear reactor. Its head office is in Paris and it is capitalized at 66 million Euros, with each parent company having a 50% stake.

KK: Continued from page 4 the plant will be restarted will gather in Kashiwazaki-Kariwa for an international symposium. The theme will be how nuclear reactors, equipment and materials withstand earthquakes.

Meanwhile, the government has established several review committees aimed at restarting the plant. The Group of Concerned Scientists and Engineers Calling for the Closure of the K-K Nuclear Power Plant is busily critiquing the activities of these committees. It has publicly submitted questions concerning the geology and ground on which the plant is based and it is preparing a second set of questions concerning equipment and materials of the reactor.

Yukio Yamaguchi (CNIC Co-Director)

Nuke Info Tokyo is a bi-monthly newsletter that aims to provide foreign friends with up-to-date information on the Japanese nuclear industry as well as on the movements against it. Please write to us for a subscription (Regular subscriber - $30 or ¥3,000/year; supporting subscriber $50 or ¥5,000/year). When paying in Japan, the subscription fee should be remitted from a post office to our post office account No. 00140-3-63145, Genshiryoku Shiryou Jouhoushitsu. Due to costly processing fees on personal checks, when sending the subscription fee from overseas, please send it by international postal money order. Alternatively, you can ask us to send you details regarding bank transfers. We would also appreciate receiving information and newsletters from groups abroad in exchange for this newsletter.
Translator: Philip White
Proof Readers: Yukio Yamaguchi, Baku Nishio, Tony Moore
Editor: Philip White
Printed on 100% recycled paper