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Citizens' Nuclear Information Center

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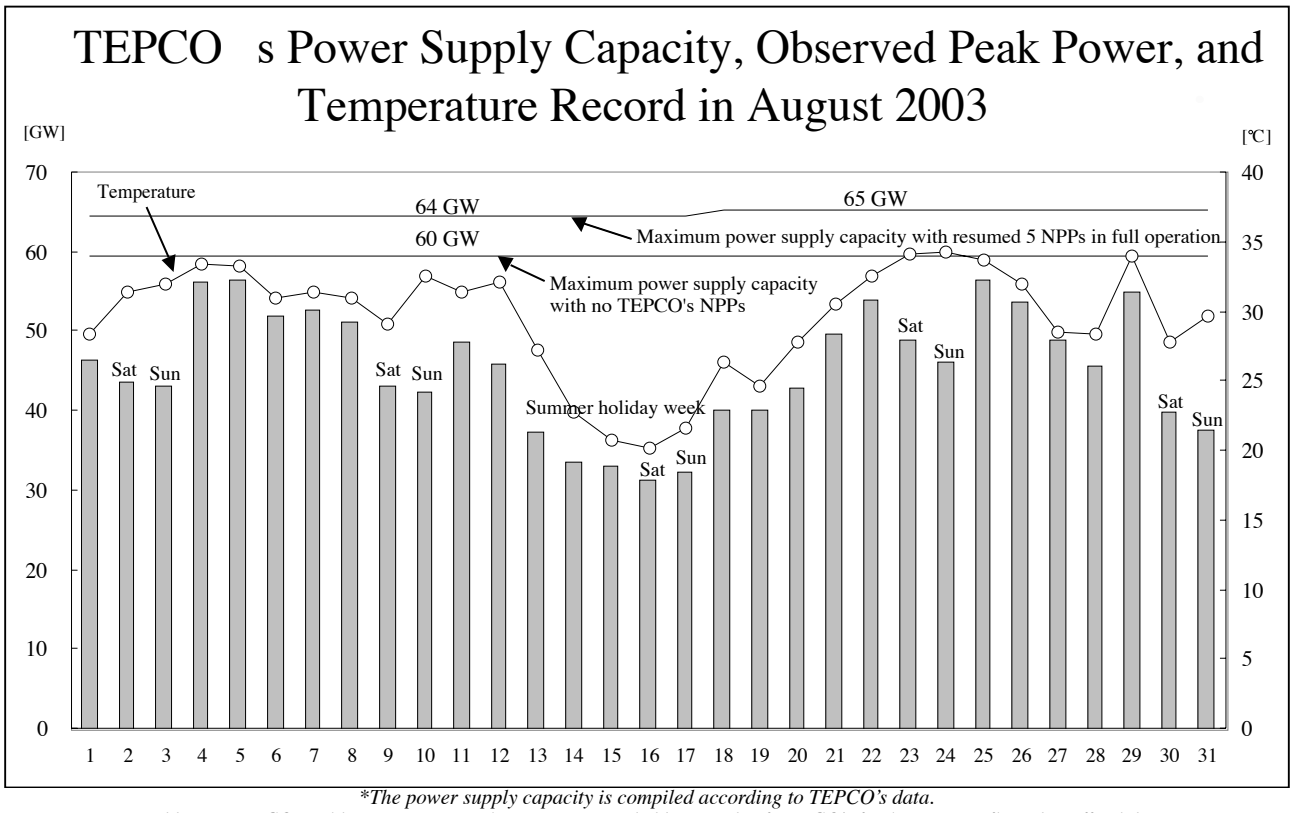
Myth of TEPCO's Power Shortage:
Tokyo can survive without nuclear power!



**The power supply capacity is compiled according to TEPCO's data.*
In addition, TEPCO could increase its supply capacity provided by outside of TEPCO's facilities, not reflected in offcial data.

As of August 31, 11 of the 17 nuclear power units operated by Tokyo Electric Power Company (TEPCO) are still not running. The 17 nuclear power units, which have an output of 17,308 MW, are 6 units at Fukushima No. 1, 4 units at Fukushima No. 2 and 7 units at Kashiwazaki-Kariwa. Operation at all 17 power units was suspended on April 15 as a result of the "Trouble concealment", which was found last year on August 29. The operation at all nuclear power units was suspended for three weeks, one by one the units were started again and by August 27 the six unit had been put into operation again.

Seeing that the operation at many power stations had been suspended, the mass media unanimously instigated a sense of crisis by announcing that a major blackout could occur in Tokyo. By

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reporting exaggerated estimates for the maximum electricity demand as if these numbers were already an accomplished fact, TEPCO maintained that its supply capacity would fall short of the power demand. However, in reality Japan experienced a relatively cool summer, so that electricity demand for air conditioners was not stretched. As a result, capacities were not fully used. TEPCO estimated 64.5GW, but there were only three days that exceeded 55GW (the maximum was 56.5GW).

As soon as some of the power stations started to operate again, the mass media reported that "the crisis had been avoided". Preparations for blackouts and appeals for electricity saving seem to have been only a transient phenomenon.

There are three lessons, which we should learn from this incident. First of all, nuclear power is itself a threat to the stability of electricity supply. Secondly, in spite of the suspension of the operation of more than 10 of TEPCO's reactors, a power outage did not occur. And last but not least, we came to realize that preparations for a power outage and a reexamining of energy consumption are important. Unfortunately, a large part of the media has served only to obscure this important lessons.

Nuclear Power caused "the crisis"

That the restarting of the nuclear power stations has helped to avoid the crisis, as reported by the media, is flawed in two ways. Firstly, the electricity supply can be satisfied even when none of the power stations are operating. Secondly, the belief that nuclear power saved us from the crisis conceals the fact in the first place.

I will talk about the first item later. For now I would like to examine the cause for the power crisis. The opinion that nuclear power stations invite electricity supply crisis is not exactly a new notion. We have been pointing out for a long time that a serious accident at a nuclear power facility would lead to the stoppage of power stations in the same area or of the same type and that this would in turn lead to a shortfall in electricity supply. In fact, when the accident at the Three Mile Island No. 2 reactor occured in March, 1979, all the PWR type reactor was forced to shut down here in Japan. However, with relatively small number of reactors (8 units) and small share with other sources of generation, concern for such a power shortage did not occur. The power supply crisis of this time shows how a similar situation could occur due to the exposure of electric power company's dishonest act.

If this is so, the crisis has not been diminished one bit by the restarting of the nuclear power stations. The risk can be reduced by further diversifying and dispersing our energy sources.

No power outage

Under the pretext that a power outage had to be avoided, TEPCO pressed to restart some of its reactors. However, as pointed out before, the restart was not necessary. Tokyo could have survived the crisis even without nuclear power. Actually, electricity received from other power companies includes electricity from nuclear power stations. But even if this had been zero, it would have been possible for Tokyo to ride out the crisis — of course, under the presumption that a real effort was made to save energy.

However, at this point the meaning of the existence of nuclear power plants needs to be questioned. In fact, if people started to seriously save energy, this would also cause problems. If TEPCO can say that thanks to the restart of nuclear power units the electricity crisis could be avoided, nuclear power can triumphantly play an active part in increasing electricity demand again. This is what TEPCO has in mind.

According to TEPCO's ad, "at present 40% of the electricity for the metropolitan area is supplied by nuclear power stations in Fukushima Prefecture and Niigata Prefecture." If in spite of the stoppage of these power stations, a blackout does not occur, then this can only mean that the atomic facilities are in excess. On the one hand nuclear power stations supply 40% of the electricity, but on the other hand thermal power stations are forced to stop operation for long periods and the rate of utilization capacity at those that are running is very low.

Even though the demand has not risen, many power stations have been built. Because of the increase of inflexible nuclear power stations, it became necessary to also build more thermal and pumped hydro power stations, which are able to

regulate the supply amount. Furthermore, extra power stations are needed as backup, in case the nuclear power stations are stopped due to an accident. This is the reason for the existence of excess capacity.

Moreover, with the progress of the so-called "Liberalization of the Electric Power Sector," the competition between the power companies becomes fiercer with each company trying to steal market share from other companies. Just like other power companies, TEPCO is desperately trying to increase its market share by lowering prices (especially rates for businesses, such as office buildings, which are at the center of electricity demand). In 2001 and 2002, before the demand increased, power rates were considerably lowered.

In the supply capacities announced by TEPCO, there was a hidden leeway since TEPCO was also able to buy electricity from other companies. However, this cannot be stretched indefinitely. Rather than increasing supply, curbing demand is more realistic and, of course, it also lowers the burden on the environment.

Don't let it end just like that

At this occasion we would like to be at the helm of a society which consumes little energy. A blackout could occur at any time. Unlike this time, when it was predicted beforehand, we should recognize that this could occur without previous notice. If that is the case, then it is important to always prepare, so that when it happens there is no need for haste. If energy saving is seen as just a transient measure, then we might be faced with even stricter measures in future.

The energy saving which is in effect at the moment consists mainly of companies changing their operating days to the weekend and decreasing the numbers of elevators and lights in use. In the end, these are only temporary measures. The burden of the energy saving is passed on to the workers, who are inclined to think that they just want to get the energy saving over and done with as quickly as possible. You could say that this energy saving leads to the reaction "I just want the nuclear power stations to run again!" among the population.

Electricity is a convenient form of energy, which leads people to unconsciously consume more and more of it. I would like to think that the recent clamor caused by the danger of power shortages presents a good chance to reconsider the issue of energy consumption. (Baku Nishio, CNIC co-director)

North American Power Failure

The fact is that a power failure can occur at any time. Strangely enough, the power failure that occurred on August 14 throughout the east of Canada and the United States, represented about the same amount of power as the summer demand in the area serviced by Tokyo Electric Power Company (TEPCO). It gives you some idea of just how concentrated the demand is in this region. If you divide the largest power demand on record (64,300MW) by the surface area (39,500 km^2), you get a figure of 1.6MW per square kilometer. Furthermore, the majority of this is concentrated in a very small area within the capital. If you just count Tokyo itself, the figure works out at 8.3MW per square kilometer.

It's fair to say that the huge power failure in North America should be taken very seriously by TEPCO. However TEPCO's public relations section, even though we still don't know why the system that is supposed to prevent chain reaction power failures in North America didn't work on this occasion, is claiming that 'the system in Japan is such that this couldn't occur here'. This is the response they make each time a nuclear accident occurs overseas.

Whereas fossil fuel and hydro power stations can be started up immediately after a power failure, nuclear reactors require two or three days before they can be fully restarted. This is because safety checks have to be carried out while they are gradually brought on line. As at the time of NRC's August 18 announcement, of the 9 nuclear reactors in the U.S. that were shut down on the 14th, only 6 had been restarted. It is not unusual for emergency shut downs during power failures to induce troubles. Even without a large scale power failure such as on this occasion, during power failures simultaneous emergency shut downs of several nuclear reactors can occur. Restarting them takes time, so there will be impediments to power supply. The point is that this could become an everyday occurrence. As we keep saying, nuclear power is an unstable source of electricity.

Workers' Radiation Exposure from Replacing Reactor Core Shroud and Recirculation System Pipes

This article reports on the levels to which utility workers exposed from the replacement of reactor core shroud and recirculation system pipes based on the data that was made public by the request from Diet members (all the information sources are derived from "periodical inspection report" by the Agency for Nuclear Industry and Safety, ANIS).

No Effective Prevention Measures: radiation exposure from the core shroud replacement

The shroud replacement was performed following six reactors (arranged in the order of implementation): Fukushima No.1 unit 3, Fukushima No.1 unit 2, Tsuruga unit 1, Fukushima No.1 unit 5, Shimane unit 1, Fukushima No.1 unit 1.

The total collective radiation dose of workers who were involved in the replacement procedure is shown in the table 1 and figure 1 (unit is "person-sievert," person-Sv). It should be pointed out that the core shroud replacement had a large share among the total dose. It is characterized as a high level of individual worker's radiation exposure who exceeds 15 millisievert (mSv) per year, because it inevitably involve workers operating inside a reactor core. The self-running welding machine is used when a shroud is newly installed. However, the attachment of machine guide inside the pressure vessel requires operation by workers and the same is true for the Jet Pumps installment right inner wall of the reactor vessel.

The breakdown of radiation dose in the case of Fukushima No.1 unit 3 is as followings (unit is millisievert, mSv): shroud replacement (0.8), Jet Pump replacement (4.6), feed-water sparger and reactor core spray replacement (0.1), nozzle safe-end replacement (1.3), additional procedures such as secondary cutting of shroud, chemical decontamination, and installing shield wall inside reactor pressure vessel (4.7). It has been known that the installment procedure of Jet Pumps involves the highest radiation exposure to workers, because they are located near the reactor vessel wall. That is why the total radiation dose at Tsuruga unit 1, which has not Jet Pumps, is relatively small as compared to

[person-Sv]	Fukushima No.1 unit 3	Fukushima No.1 unit 2	Tsuruga unit 1	Fukushima No.1 unit 5	Shimane unit 1	Fukushima No.1 unit 1
All Periodical Inspection	16.90	15.54	7.33	12.72	9.92	10.80
Shroud Replacement	11.50	7.72	2.92	6.09	8.27	4.62
Replacement Period (Periodical Inspection)	97.5-98.9	98.8-99.8	99.8-01.3	99.12-00.10	00.5-01.4	00.12-01.11
Number of workers who received more than 15 mSv [person]	223	199	47	142	219	65

Table 1. Nuclear Workers Radiation Exposure from the Periodical Inspections including Shroud Replacement

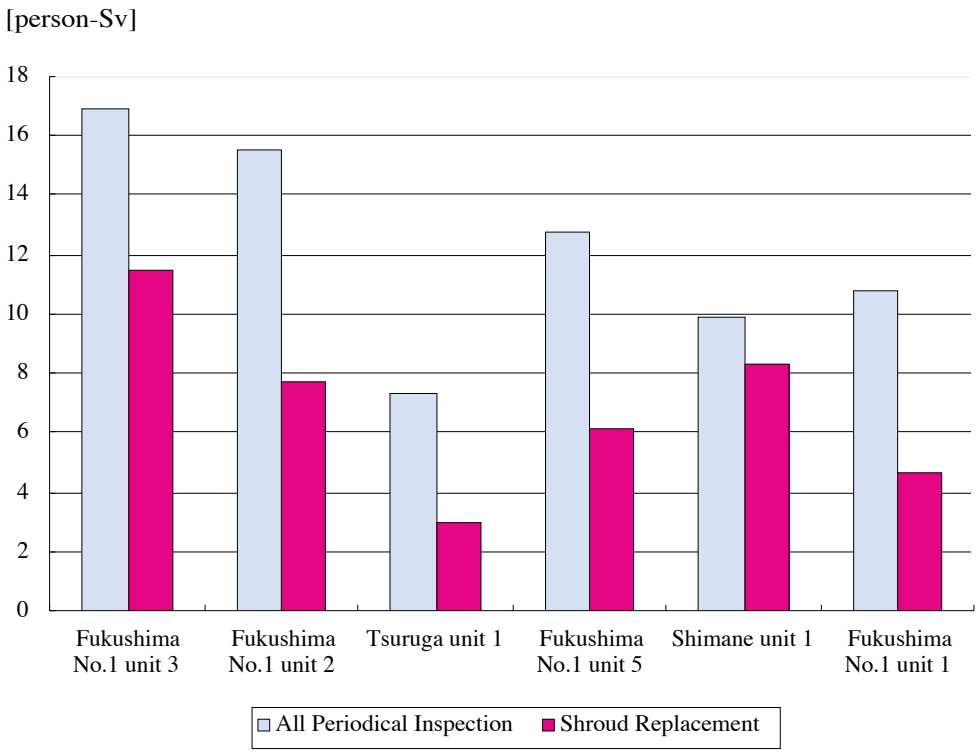

Figure 1. Nuclear Workers Radiation Exposure from the Periodical Inspections including Shroud Replacement

other cases.

From the same data, the dose rate of 3.3mSv per hour is recorded inside the core of reactor vessel. We have not obtained the data for other 5 reactors yet. In the Journal of Atomic Energy Society of Japan, September 2002, following several technical modifications at the Simane unit 1 were reported: material used for a shield wall was changed from lead to tungsten and chemical decontamination was repeated inside of a pressure vessel. Even such measures were adapted, however, the fact that utility workers are forced to expose high level of radiation dose still remains as a substantive issue.

No Data is Available for the Replacement of Recirculation System Pipes

The workers' radiation dose received from the replacement procedure of recirculation System Pipes were summarized in the table 2. Regrettably, this table is far from complete. ANIS has refused to disclose the actual data by saying that the agency does not administer such data. In the case of repairing reactor's internal components, the Electric Utilities Law defines that electric power company should submit the relevant data when it plans to conduct repairing work which concerns the strength and performance of laying pipes. If the pipe's material and dimensions (thickness and its caliber) are the same as the original pipes, they are eligible for the exception of data submission to the agency and, therefore, no data is available based on the law.

Let us introduce the example of Shimane unit 1. According to the attached document No. 8 of the "comprehensive inspection report regarding the appropriate maintenance for the voluntary inspection procedure" (which was accessible at the Chugoku Electric Power Co.'s homepage on March 18, 2003 http://www.energia.co.jp/energiaj/company/atom.html) , there are no data available for the 22th periodical inspection despite the fact that the replacement of recirculation pipes were conducted throughout four periodical inspections (17th, 18th, 19th, and 22th).

According to the report "evaluation of

	Periodical Inspection (PI)		Total Radiation Dose [person-Sv]		
	Number of PI	Date (Year-Month)	In the Periodical Inspection	Replacement of Recirculation Pipes	Note
Fukushima No.1 unit 1	6th	76.8-78.3	32.76	4.68	
	7th	79.12-80.9	31.59	3.48	
	19th	96.8-97.3	8.57	2.48	
	22th	00.12-01.11	10.80	1.96	Shroud was replaced
Fukushima No.1 unit 2	3th	78.12-79.8	22.28	3.22	
	4th	80.4-80.10	16.86	1.59	
	17th	98.8-99.8	15.54	2.34	Shroud was replaced
Fukushima No.1 unit 3	2th	78.6-78.12	22.60	3.86	
	3th	79.10-80.5	19.50	2.65	
	5th	82.5-82.12	21.23	7.56	
	15th	95.12-96.4	4.97	1.72	
	16th	97.5-98.9	16.90	0.57	Shroud was replaced
	17th	99.10-00.3	5.44	2.56	
Fukushima No.1 unit 4	15th	97.9-98.3	6.34	1.93	
	17th	00.5-00.10	5.88	2.50	
Fukushima No.1 unit 5	15th	97.3-97.8	4.94	1.46	
	17th	99.12-00.10	12.72	1.74	Shroud was replaced
Tsuruga unit 1	26th	99.8-01.3	7.33	0.37	Shroud was replaced
Shimane unit 1	7th	81.2-81.7	5.72	1.48	
	8th	82.5-82.10	8.89	1.85	
	9th	83.8-84.1	6.39	1.47	
	17th	93.9-94.1	2.95	0.54	
	18th	94.10-95.4	4.85	2.30	
	19th	96.2-96.8	4.10	3.05	
Hamaoka unit 1	13th	93.9-94.8	14.00	8.88	All recirculation pipes were replaced.
Hamaoka unit 2	13th	99.10-00.5	9.23	1.78	

Table 2. Situation on Workers' Radiation Exposure from the Periodical Inspection

nuclear power facilities' equipment" released on March 2003 from the ANIS, the inspection of welded-joint portion of recirculation pipes, workers were exposed to radiation dose around 300 to 400 person-mSv, the three quarter of which were from the header and riser pipe portion. Although the high level of radiation exposure would be expected from the replacement work at the connection parts to the riser pipe of Jet Pump which was located most closely to reactor vessel in the 22th periodical inspection of Shimane unit 1's, ANIS did not monitor the relevant data and, therefore, data is not available for public.

It has been pointed out that the length and depth of cracks found in recirculation system pipes, by conducting an ultralsonic wave test (UT), were actually underestimated; suggesting the UT cannot measure cracks with precision.

There is no doubt that the accuracy of measuring length and depth of cracks in the reactor shroud by employing UT would not be improved without understanding the actual working condition.

Chihiro Kamisawa (CNIC staff)

An Open Discussion about Reprocessing Policy was held

On July 12th a workshop entitled "An Open Discussion about Nuclear Energy Policy Part 1 — what to do with reprocessing spent nuclear fuels" was held by the Research Group for Geological Disposal Ploblems, which was formed as a joint-study group of *Takagi School* and CNIC for critically reviewing the proposed nuclear disposal plan. The plan for Japanese geological disposal is promoted on the condition that spent fuels are vitrified. That is, all the spent fuels are planned to be reprocessed. However, before the TEPCO's cover up scandal in August 2002, *pluthermal* plan has been brought to a standstill and Rokkasho Village in Aomori Prefecture, where a reprocessing plant is currently under construction, has become the focus of attention. Against this background, therefore, this workshop on nuclear reprocessing was organized which would invite a discussion of the geological disposal of nuclear wastes. The symposium was led by Shohei Yonemoto (Center of Life Science and Society) with following panelists: Kawada Tomio (Japan Nuclear Cycle Development Institute, JNC), Nagano Hiroshi (Young Nuclear Scientists Study Group), Tetsunari Iida (Institute for Sustainable Energy Policies), and Yo Fujimura (Kyoto University/Geological Disposal Research Group).

Regarding Japan's energy policy, Mr. Fujimura stated his stance against the use of nuclear energy, then he argued that time had come to review nuclear power. He postulated that at least the construction of new nuclear power plant should be stopped and that a discussion including the option for the abolishment of nuclear power should be needed. Mr. Kawada said that nuclear power was still indispensable since the substitution with renewable energies was not realistic and it is obvious that fossil fuels would be exhausted in the future. Mr. Nagano pointed out that because of the difficulty in constructing new power plants and increasing number of power plants was to be decommissioned, the contribution from nuclear energy will decline in reality. He raised the question how the existing gap would be covered, even if it were possible to raise the output again. He suggested that the promoters of nuclear energy should make a long-term vision. On the other hand, Mr. Iida pleaded for a shift to renewable energies and an efficient use of energy. He made the concrete proposal that nuclear energy should be phased out while agreed on a total power generation from nuclear power.

In regards to the nuclear fuel reprocessing, Mr. Kawada stated that as long as Japan was pursuing nuclear power, reprocessing policy was necessary. However, he explained further that since a realistic utilization of plutonium was not in sight, there was no hurry in the operation of Rokkasho reprocessing plant. Mr. Nagano said that the decision on the reprocessing plant should not be made as such that it could not be backtracked later. He proposed that the spent fuels should be stored in an interim storage site and that the construction of Rokkasho plant should be halted. He also said that it was time to stop and think about the whole issue again. Mr. Fujimura pointed out that the reprocessing policy would be deadlocked and technical problems would also persist with the handling of nuclear wastes if the Rokkasho reprocessing plant started its operation, MOX fuel fabrication plant would be necessary as plutonium would become in surplus. Mr. Iida pointed out to drew the audience' attention to the economical inefficiency of the Rokkasho reprocessing plant in particular and he called for a shut down of the plant.

An important result of the symposium is the fact that all panelists in spite of the difference in opinion regarding the reprocessing policy agreed that a speedy start up of the Rokkasho reprocessing plant was not necessary.

(Hideyuki Ban, CNIC Co-director)

Data: Nuclear Workers' Radiation Exposure and TEPCO Coverup Accident

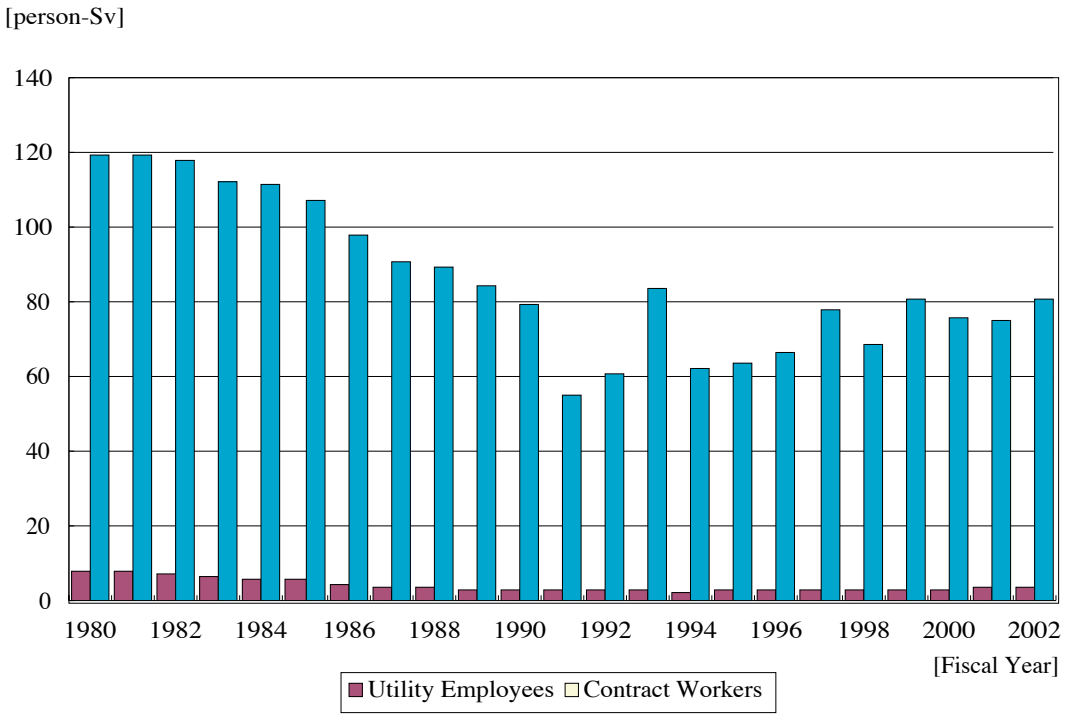

Figure 1 Annual Collective Dose of Workers' Radiation Exposure at Nuclear Plants, 1980-2002 (FY)

Fiscal Year	Utility Employees	Contract Workers	Total
1980	7.96	119.52	127.48
1981	7.84	119.33	127.17
1982	7.33	117.67	125.00
1983	6.60	112.06	118.66
1984	5.97	111.25	117.22
1985	5.36	107.25	112.61
1986	4.31	97.68	101.99
1987	3.88	90.93	94.81
1988	3.76	89.00	92.76
1989	3.12	84.28	87.40
1990	2.96	79.01	81.97
1991	2.69	55.16	57.85
1992	2.66	60.89	63.55
1993	2.78	83.86	86.64
1994	2.45	62.48	64.93
1995	2.85	63.50	66.35
1996	2.92	66.10	69.02
1997	2.98	77.77	80.75
1998	3.07	68.78	71.85
1999	3.06	80.69	83.75
2000	3.13	75.72	78.85
2001	3.35	74.69	78.04
2002	3.41	80.64	84.05

Table 1 Annual Collective Dose of Nuclear Workers (person-Sv)

The workers' exposure to radiation at nuclear power stations reached its maximum around 1980, but declined there after as a result of the growing public criticism. Within the strengthened anti-nuclear power movement the publishing of photograph collections and books, which unveiled the truth about the exposed workers, culminated in 1979. And in 1981, subcontractors working at power plants formed their own union. As a result of these activities, measures to reduce the radiation dose were implemented. For example, automated machines were increasingly introduced in a highly radioactive work environments.

However, since the beginning of the 1990s a tendency towards an increase in radiation exposure can be seen once again. There are two reasons for this development. The focus has been shifting away from measures to decrease the dose level towards improving economic

efficiency of reactor operation as some of nuclear power stations became old. The many prominent increases in the 1990s are a result of the exchange of large, timeworn equipment (i.e. the year of 1993). It is predictable that the radiation dose from now on will further increase.

However, the surge in 2002 can be attributed to increase a number of inspections after the disclosure of the troubles at the TEPCO's plants. At all 53 nuclear power units the total increase in radiation dose since last year has been 6 person-Sv. But if one looks only at BWRs, the increase was 12 person-Sv, or 25% up from the previous year. If the radiation at PWRs had not decreased by 6 person-Sv, this would have been the highest value in 14 years.

The increase has been especially large at Onagawa, Fukushima No. 1 and No. 2 Kashiwazaki Kariwa and Hamaoka. At these five nuclear power plants the increase has been 14 person-Sv. At Onagawa and Kashiwazaki Kariwa, the radiation dose has been the highest since the operation has been started. The Figure 2 compared the dose level with that of an average for the past three years. The averaged value was used because the exposure dose occasionally declined considerably last year.

There were five power plants at which workers were exposed to more than 15mSv. At Onagawa and Hamaoka the maximum was 19.7 mSv, at Fukushima No. 1 19.6 mSv, at Fukushima No. 2 18.9 mSv and at Kashiwazaki Kariwa 18.4 mSv. In all cases, most of the exposed workers were subcontractors.

However, the data from the Agency for Nuclear and Industrial Safety (ANIS) does not list any values for workers working at multiple nuclear power stations, since the data is only released for each nuclear power plant.

However, the ANIS only releases radiation dose data compiled by each power plant. They reported that those who exposed more than 15 mSv were 5 utility employees and 556 contract workers. Yet, if we look at the workers' exposure data, by the Radiation Dose Registration Center for Workers (*Hosha-sen Jyuji-sha Chuo Touroku Center*), there were actually 958 workers, which included three workers whose radiation exposure exceeded 20mSv.

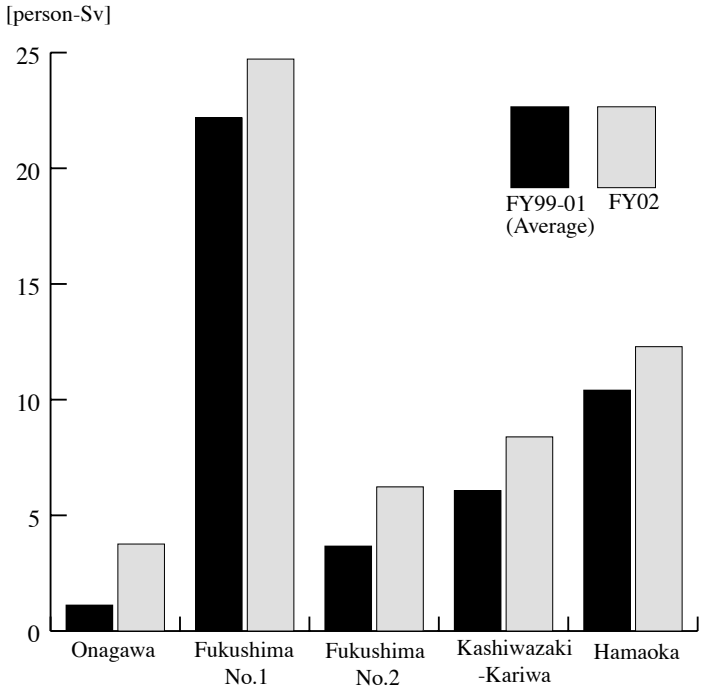

Figure 2 Workers' Radiation Dose at the" Troubled" Nuclear Power Plants

Anti-Nuke Who's Who

Dr. Saburo Murata:

An activist doctor, walking alongside the Hibakusha in their suffering

By Mikiko Watanabe

For many years Dr. Saburo Murata has been treating atomic bomb victims of Hiroshima and Nagasaki and Minamata disease* patients. He also works with nuclear industry workers who have been exposed to radiation, walking alongside them in their suffering, as he continues his wide-ranging activities.

I have known him since 1992, when CNIC ran the Japan office for the International Symposium on the Effects of the Chernobyl Accident in Minsk, the capital of Belarus. I accompanied him there on that occasion. In Minsk he spoke of the "underestimation of the damage caused by the Hiroshima and Nagasaki atomic bombs." He has also given reports on the health situation of Japanese Hibakusha and nuclear industry workers at places such as the World Conference of Nuclear Victims.

At the moment negotiations have begun with the Ministry of Health, Labor and Welfare in regard to the application of Mitsuaki Nagao for recognition as having a work related illness. He incurred multiple myeloma** as a result of exposure to radiation through his role as supervisor of work on the piping system of nuclear power plants. Dr. Murata submitted a persuasive medical opinion on the cause-effect relationship between Nagao's radiation exposure and the onset of his disease. He is proving to be a powerful weapon in the negotiations.

Saburo Murata was born in Kochi Prefecture in 1947. Many of the fishing boats and the fishermen in the region of the Bikini hydrogen bomb test were from Kochi Prefecture and the movement to ban nuclear weapons was very strong there. When he was an elementary school pupils, he participated in peace marches

with his father, who was a teacher. Activities such as this brought him into contact with the issue of nuclear weapons and radiation and he was raised in an environment where the anti-nuclear movement was a topic of daily conversation.

While he was wrestling with his studies to be a doctor at Osaka University, he continued to visit Hiroshima and Nagasaki to hear the stories of the Hibakusha and it was during this period that he decided to make the Hibakusha issue his life work.

Since 1978 he has been treating atomic victims etc at the Han-nan Central Hospital, while simultaneously holding down the posts of head of radiology and internal medicine and head of the medical examinations center.

Since the 1999 Tokaimura criticality incident, he has been doing health surveys of the local residents. "I always want to take as my starting point for health consultations the position of the people whose access to medical treatment and to society has been obstructed," says Dr. Murata, who really is a great source of salvation for people who are suffering because their health has been damaged.

** Minamata disease: Disease caused by mercury poisoning and first identified in the Japanese fishing town of Minamata in 1956.*
*** Multiple myeloma (also known as myeloma or plasma cell myeloma) is a hematological cancer. It is a cancer of the plasma cell, an important part of the immune system that produces immunoglobulins (antibodies) to help fight infection and disease. Source: The Multiple Myeloma Research Foundation (http://www.multiplemyeloma.org/)*

NEWS WATCH

Draft of Energy Basic Plan Compiled

On July 18, the Ministry of Economy, Trade and Industry (METI) compiled a draft of the Energy Basic Plan, which indicates the future direction of the Japanese government's energy policy. METI submitted the plan to the Subcommittee for Energy Basic Plan which is organized under the Advisory Committee for Natural Resources and Energy. The Subcommittee approved the plan later. It is likely that the final draft will be crafted after the public comments, and then the Cabinet will decide whether to give the go-ahead to the plan.

The draft plan emphasizes "ensuring a stable supply of energy" as its top priority and the basis of energy policy is to secure Japan's energy requirement as the world energy demand grows. What an embarrassing policy it is! The second priority is "adaptation to the environment." And last, "the use of market forces" is included in the basic plan with a condition that it would not be against the top two policies.

Nuclear power is considered as being in conformity with the top two policies, and "should be regarded as a key power source, therefore, it should be promoted." The draft plan further states that for "the use of market forces," a system will be prepared so as to place priority on the power supply from nuclear power, and relief measures against investment risks for back-end business will be taken. With regard to the policy on the nuclear fuel cycle, it states that "while its promotion is a national basic policy, it is necessary to steadily approach it with flexibility not rigidly."

The content of the Basic Plan is almost identical to that of the LDP's Interim Report on Energy Basic Plan, which was officially decided on July 27. According to a general view of the energy industry circle, the only difference is that in the tone of the LDP's report has become a bit weaker stating that, "nuclear power will be promoted as the top priority issue as the core of the state energy policy".

Radioactivity Detected in Metal Scraps Exported from Japan to Taiwan

The Asahi Shimbun (June 28) reported that the surveys conducted by the Executive Yuan of the Republic of China had revealed that a radiation level of 0.5μSv/h was detected, exceeding Taiwan's standard level by the factor of four in the stainless steel scrap imported from Japan in 2002.

The sources of the radiation were: health appliances for home baths, which contained uranium (detected in March and April); metal pieces containing ^{60}Co (588kBq) in June; and cylindrical metals containing ^{137}Cs (180MBq) in August. The Taiwan government sent documents to the Japanese government in July and September and warned them of this problem. METI responded by simply commenting that no evidence found that these scraps were intentionally exported. The exporter is said to be claiming that they inspected both at the time of purchasing and exporting metal scraps, but no radiation was detected then which would be the indication that the scraps was contaminated in Taiwan. However, the same company carried out all four export shipments.

The 8th Shipment of High-Level Radioactive Waste from France

One hundred and forty-four canisters of vit-

rified high-level radioactive waste, generated from reprocessed spent fuel by COGEMA of France, arrived on July 23 at Mutsu-Ogawara port in Rokkasho-mura, Aomori Prefecture. The canisters were unloaded the next day and transported to the storage facility of Japan Nuclear Fuel Limited. They were loaded on a transport ship, the Pacific Swan, which left Cherbourg, France, on June 4 and arrived in Japan via the Panama Canal.

During their land transport, radioactivity measurements were conducted at spots two to three meters away from the vehicles. The maximum level exceeded 1900nSv/h, 78 times higher than the ordinary level. There is concern that workers who handled the waste, drivers and prefectural and village staff members who will conduct on-the-spot inspections may face the same risk.

Approval Given for Construction of Tomari 3

On July 2, Takeo Hiranuma, the Minister of Economic, Trade and Industry, gave official approval for the construction of Hokaido Electric Power Co.'s Tomari 3 (PWR, 912 MW). The company plans to start its construction in November and aims to commence its commercial operation in December 2009.

It is the first time after four years that an approval is given for building a reactor, and in fact after 16 years for a PWR type.

Mutsu City Officially Invite a Spent Fuel Storage Facility

On July 23, Masashi Sugiyama, the Mayor of Mutsu City in Aomori Prefecture, visited the head office of Tokyo Electric Power Co. and handed a letter of request to TEPCO's President Tsunehisa Katsumata concerning the sitting of Japan's first off-site storage facility of spent fuel. As reported in NIT No. 95, TEPCO revealed its plan to construct a facility to store 5,000-6,000 tons of uranium of spent fuel for as long as 50 years.

The mayor announced his intention to invite the facility, stating that citizens' agreement was obtained. However, there is a move among the citizens to establish a city ordinance on the plebiscite so that pros and cons of the sitting can be decided through the plebiscite. By August 4 approximately seven times more than enough petitions for the enactment of the ordinance were collected and submitted to the city's election management committee.

An Explosion at Fugen - Local Governments Being Put in Confusion

On July 4 there was an explosive sound and white smoke rose at the waste treatment building on the site of Fugen, an advanced thermal reactor, in Tsuruga City, Fukui Prefecture. It was caused by abnormal combustion of the waste incinerator. Fortunately it did not become serious, but an observation window heavily cracked and the smoke spewed out of incinerator. Since the sound of the explosion was so loud, local government offices and fire stations were inundated with telephone calls from citizens inquiring such as whether they should evacuate. A panic situation would be unavoidable if a big accident occurred.

Fugen is a prototype Advanced Thermal Reactor (1,650 MW) owned by the Japan Nuclear Cycle Development Institute, which began operation in March 1978 and was decommissioned in March 2003.

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