Country Report of Japan

Current Status on Nuclear Public Information in Japan

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In this report, current status on public information (PI) activities on nuclear energy in Japan are stated as follows.

1.Current Issues of Japan's Nuclear Power Development
2.Current Status and Topics of Daily Efforts for PI on Nuclear Energy in Japan
3.FNCA PI Project Activities in Japan
4.FNCA PI Joint Survey on Understanding and Interest in Radiation among High School Students in FNCA Countries
5.Future Plan to Enhance FNCA PI Project

1. Current Issues of Japan's Nuclear Development

There are 52 nuclear power plants (23 PWRs, 29 BWRs) in operation with the total power capacity of 45,742 MW in Japan as of October 31, 2003. In 2002, nuclear power supplied about 35% of the total electricity. There is no doubt that nuclear energy serves as the main electric power sources in Japan. On the other hand, however, we are facing some issues to be solved for further nuclear development. To overcome the obstacles, public acceptance activities and confidence-building measures are much more necessary than ever before.

The main issues are A) Tokyo Electric Power Company (TEPCO)'s falsifications of self-inspections data of their nuclear power plants, and B) Delayed MOX-use program. Though both issues have its own complicated background and contributing factors, there are common problems: lack of public understanding and trust for nuclear technology and industry. These issues and our countermeasures are touched upon.

A. TEPCO's Data Falsifications of Nuclear Power Plants

A series of falsifications of self-inspection data by TEPCO was revealed in August 2002. TEPCO is the nation's largest electric company with 17 nuclear power units (17.308 GW). Although there were no radiation leakage and injuries due to the equipment and facilities in question, it incited in social uproar towards the entire nuclear industry in Japan.

It compelled not only TEPCO but also other companies to stop their nuclear power plants' operation for investigation and modification. TEPCO filed a final report on its comprehensive review and plan for implementing preventive measures in February 2003. It proved that there were no safety problems, which was accepted by the government.

When TEPCO's all units became out of service in this summer, shortage in the power supply was expected. As this summer was not so hot as the average, the worst case of blackout was averted. While TEPCO carried out a public energy-saving campaign, it explained the matters to municipalities in the siting areas in order to regain their confidence to restart the operations. As of September 2003, TEPCO's 7 units resumed the operations with the local understanding and consensus. 10 units are still out of service.

It threw doubt on Japan's nuclear administration system to check the nuclear power plant's data, too. The competent agency, Ministry of Economy, Trade and Industry's Nuclear and Industrial Safety Agency (METI-NISA) revised the related laws to give legal significance to self-inspections by utilities and to introduce maintenance standards.

B. Delayed MOX-use Program

To make effective use of uranium resources for electricity, Japan aims to accomplish nuclear fuel cycle. For this purpose, we plan to reuse the spent fuels as Mixed Oxide (MOX) fuels in light water reactors (LWRs).

Cabinet approved that the electric power companies moved ahead to begin using MOX fuel in 1997. According to the original plan, nuclear industry had aimed at loading MOX fuel in 16 to 18 reactors by 2010, starting with the two TEPCO units and two Kansai Electric Power Co. (KEPCO).

At present, MOX-use is not carried out yet in spite of nuclear industries' great efforts. Repeated misconducts and accidents including recent TEPCO's falsifications of self-inspection data prevented them from loading the first MOX fuel in the LWRs. To achieve the plan, public understanding and regaining trust toward nuclear technology and nuclear industry are indispensable.

TEPCO announced its intention to postpone implementation of the MOX program scheduled for its Fukushima-I-3 and Kashiwazaki-Kariwa-3 nuclear power stations (NPSs), saying it would not be able to implement it after having lost the confidence of the residents.

The two prefectures where those units are situated said that they, too, would be freezing the program. At Kashiwazaki-Kariwa-3, after the villagers of Kariwa voted in a referendum in 2001, the first loading had been anticipated in September 2002.

KEPCO's MOX plan has been on hold since 1999, when it was revealed that MOX fuel data had been falsified by British Nuclear Fuels plc (BNFL), and there are no present prospects for the loading. The BNFL-produced MOX fuel already delivered to the facility left the site by vessel in July 2002, and arrived back in Britain two months later in September. (the source：Nuclear Power Plants In The World 2002 , JAIF)

2. Current Status and Topics on Daily Efforts for PI on Nuclear Energy in Japan

Daily efforts are made in order to gain and develop the public support to nuclear

energy by every possible sectors in Japan as JAEC, each utility or JAIF.

In this report, efforts made by JAIF especially ,her local branches are stated.

There are 5 JAIF local branches located in each area in Japan；they are Tohoku, Ibaraki, Hokuriku, Chubu and Kansai areas.

The branches are oriented by such members as utilities, companies, local government, labor unions, and groups of residents as opinion leaders in each area.

These branches or members are acting quite aggressive to promote and gain understandings for nuclear energy from the residents.

We show some examples of actual activities as follows；

A. Holding meetings for the study of energy and environment

They ask school teachers from elementary schools to high- schools to join the meetings and give them opportunities to gain knowledge and experience concerned about nuclear energy through lectures (themes are energy and environment, radiation and radioactivity, energy future etc.) or sightseeing tours to nuclear related facilities as nuclear plants.

B. Distributing books and pamphlets

Useful and interesting books and pamphlets on nuclear energy are distributed to libraries and schools.

C. Events

Painting contests or composition contests are held under the branches aimed to promote interests from younger generations as well as their parents.

Given themes are such as “My dream and future society” or “My idea about energy and nuclear energy” etc.

D.Lectures and Seminars

Experts on nuclear energy are sent to give lectures or seminars to the public as well as students at schools.

3. FNCA PI Project Activities in Japan

A. Activities by FNCA PI Project Group

The FNCA PI activities are planned, executed and evaluated by the Project Group (Steering Committee). The members are selected among the numerous PI experts in research institutes, electric power companies, and related public or private organizations with authorization of MEXT.

A-1：Members, Tasks etc.

- For FY2003, the group consists of six members headed by Project Leader (PL), Prof. Dr. Yasumasa TANAKA. The group was supported by a national coordinator of Japan (Dr. Sueo Machi) and observers from MEXT etc.
- The group serves as useful board to discuss the PI project, and is responsible for making, developing, achieving and evaluating the activities plans

A-2：Actual Activities (FY2002- 2003)

- Group Meetings are usually held twice a year. The objects are making action plans, sharing information, evaluating actions as well as preparing and following up Project Leaders Meeting (PLM).

A-3：Task Force Group for Joint Survey on Understanding and Interest in Radiation among High School Students in FNCA Countries

- Group Meetings: Task force Group consists of five members including two teachers at high school headed by a PL and a Sub-PL (seven people in total). The meetings were held six times from March 2002 to January 2003.
- Activities：The members got together to discuss how to carry out the survey such as respondents, time, questionnaires etc for three times. In the middle of August 2002, the draft of questionnaires was made and sent to the survey participating countries. The group improved the first draft by reflecting the comments from some countries, the final version of questionnaires was fixed and sent out in the middle of September.

A-4：Compile and Analyze the Survey

- Receiving the questionnaires, each country made the survey report from September to October 2002. The reports were compiled and broken down by JAIF staff. During these works, task force meetings were held two times to evaluate and conclude the result. The survey result of the first version came out in February and introduced in the Coordinator Meeting in March 2003.

B. Other Activities

B-1: Follow Up of Joint Study --- Lecture at High School in February 2003

As the joint survey follow-up, lecture on radiation application was organized at the one of the collaborator for the survey, Aizu Industrial High School in February 2003. The lecture was organized as special event for the youth. Dr. Machi, national coordinator of Japan made a presentation on various application methods of radiation implemented in the world such as food irradiation, radiation breeding, medical equipment sterilization, and so on. He also referred to nuclear power generation emphasizing its importance as stable energy source and for global environment preservation. About eighty students participated in the lecture and deepened knowledge and understanding about radiation.

B-2：Presentation for Atomic Energy Society of Japan

The survey results were introduced in the panel session on nuclear education and research of Atomic Energy Society of Japan's Autumn Meeting in September 2003. In

the session, Prof. Dr. Tanaka, PI Project Leader, Dr. Machi, National Coordinator of Japan, and Mr. Ejiri, JAIF senior researcher participated in the panel discussion as well as presenting the method of the joint survey in Japan and the highlights of result. Panelists and attendants exchanged their views and comments on the survey outline.

B-3：Regional Speakers Bureau (RSB) Activities

RSB is the one of the effective activities to support public relations event in FNCA countries. Specialists and lecturers of FNCA countries are sent to the event like symposiums, seminars etc., on request.

In FY2003, Dr. Machi made a Special Lecture at NUTEC THAILAND 2003 in June 2003 upon request of Thailand. The conference takes place every two years for professionals of nuclear energy. This time about 400 people participated in it and exchange opinions on nuclear energy.

B-4：Communication through mass media

Articles on nuclear energy and radiation application were carried in some magazines and newspapers. Also lectures on nuclear energy such as “Nuclear Technology and International Cooperation” were made for some meetings and conferences. Main presenter is Dr. Machi, national coordinator of Japan. These activities greatly contributed to promotion of public understanding toward nuclear energy and dissemination of FNCA activities.

B-5：AsiaN Net and FNCA Web-Site

Asia Nuclear Cooperation Network (AsiaN Net) is the one of the frameworks to exchange information on nuclear science and technology between the FNCA countries. It aims to promote nuclear public information activities in each country. Under this network, JAIF is distributing its English monthly journal, “Atoms In Japan” to each country by 10 copies.

FNCA Web-Site both in English and Japanese was established in FY1999. The homepage consists of two main parts: FNCA activities such as workshop and meeting, and FNCA database such as Newsletter and meetings’ documents. In FY2003, page design was planned for renewal as well as updating articles.

4. FNCA PI Joint Survey on Understanding and Interest in Radiation among High School Students in FNCA countries

The results of the survey analysis marked the following characteristics, in particular, of the Japanese students’ responses.

- What Japanese students are most interested in are “Future life” and “Friends”.
- Two-thirds of Japanese students show more interest in “Radiation” than other countries do.

- The word of “Radiation” is most closely associated with “Nuclear Power Plants” for the Japanese students. Other things such as “X-ray Photograph”, “Hiroshima”, “Nagasaki” and “Nuclear Weapons” are common to all countries.
- The survey shows that the following words are described in their school textbooks in Japan: Hiroshima & Nagasaki” (World History), “Nuclear Power” (Politics & Economics), “Application of Radiation” (Health & Sports), “Radiation & Radioactivity” (Physics), “Nuclear Reactio & Radioactivity” (Physics)
- Top information source on science and technology is “TV & Radio” in all countries

5. Future Plan to Enhance FNCA PI Projects

A：The importance of nuclear energy should be more emphasized to the public. For this purpose, the following strategies and efforts are required for FNCA countries.
A-1：Effective ways and procedures to communicate with mass media should be programmed in the future plan. This subject will be discussed in next PI PLM.
A-2：Strategy to foster capable human resources for conveying information and knowledge on nuclear energy to the public should be developed in each country. This subject will be discussed in next PI PLM.

B：Enhance FNCA Web-Site
To make FNCA homepage more attractive and informative for users, more useful links should be added while putting more valuable and updated articles and database.