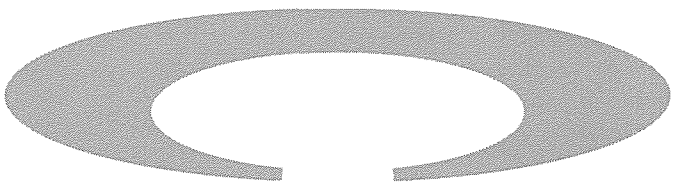
The 38th JAIF ANNUAL CONFERENCE

ABSTRACTS



April 18～21, 2005

Civic Hall, Kashiwazaki City, April 18

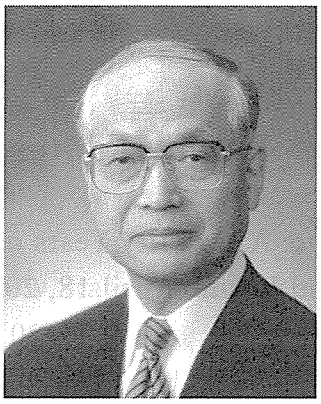
Toki Messe, Niigata City, April 19 & 20

JAPAN ATOMIC INDUSTRIAL FORUM

第38回原産年次大会 予稿集 変更点一覧
List of changes in the 38th JAIF Annual Conference Abstracts

項目(item)	変更前 (before change)	変更後 (after change)
開会セッション	科学技術政策担当大臣所感 棚橋泰文　科学技術政策担当大臣	科学技術政策担当大臣所感(代読) 塩沢文朗　内閣府大臣官房審議官(科学技術政策担当)
	経済産業副大臣所感 保坂三蔵 経済産業副大臣	経済産業大臣所感(代読) 細野哲弘　経済産業省資源エネルギー庁 次長
セッション1	基調講演 石川迪夫　元北海道大学教授	基調講演 石川迪夫　日本原子力技術協会理事長、元北海道大学教授
	パネリスト ーーーー　米国デトロイト電力フェルミ発電所	コメンテーター M. コイル 米国原子力エネルギー協会(NEI)副理事長
Opening Session	Yasufumi Tanahashi, Minister of State for Science and Technology, Japan	Bunro Shiozawa, Deputy Director for Science and Technology, Cabinet Office, Japan (To read text for Minister Y. Tanahashi)
	Sanzo Hosaka, Senior Vice Minister for Economy, Trade and Industry, Japan	Tetsuhiro Hosono, Deputy Director for Natural Resources and Energy Policy, Ministry of Economy, Trade and Industry, Japan (To read text for Minister S. Nakagawa)
Session 1	Keynote Speech Michi Ishikawa, Former Professor of Hokkaido University, Japan	Keynote Speech Michio Ishikawa, President, Japan Nuclear Technology Institute; Former Professor of Hokkaido University, Japan
	Panelist ----　Enrico Fermi Nuclear Power Plant	Commentator Michael Coyle, Vice President, Nuclear Energy Institute, U.S.A.

Jun-ichi Nishizawa
JAIF Chairman



Akira Hasegawa
President, Niigata University
Chairman of the Preparatory Committee
for the 38th JAIF Annual Conference

The 38th JAIF Annual Conference

After Fifty Years of Nuclear Power, A New Stage for Safety and Trust

Fifty years have passed since President Eisenhower delivered a speech on "Atoms for Peace" in 1953 and Japan established the Atomic Energy Basic Law in 1955. During the period, Japan has positively engaged in the development of nuclear energy for peaceful purposes. It now operates 53 light water reactors, which steadily produce approximately 30 percent of total electricity of the country.

The year of 2005 would be historic for the Japanese nuclear world. Reestablishing public confidence in existing nuclear power and its future strategy is of great significance. The first commercial reprocessing plant in Rokkasho-mura where uranium tests started at the last year end aims commercial operation in two years, while repair works for restarting the FBR Monju has been promoted. Japan's determined goal to complete nuclear fuel cycle is expected to realize in the near future.

To take a global look, the Kyoto Protocol has come into force, which underscores the importance of carbon-free nuclear power to tackle with global warming. Recent positive moves in the world includes the French decision to build an European Pressurized Water Reactor and China's ambitious plans to expand nuclear power to meet the increasing energy needs.

In this important year, the Japan Atomic Industrial Forum (JAIF) is pleased to hold its 38th Annual Conference at two cities of Kashiwazaki and Niigata, April 18-21, 2005 upon invitation of the local governors.

With seven LWRs (8,212 MWe in total), Kashiwazaki-Kariwa has grown to one of the leading nuclear power plant siting communities in the world.

At the 38th JAIF Annual Conference, nuclear energy prospect in the electric market liberalization will be presented from top executives of Japan and overseas. Views and opinions of the local residents in Kashiwazaki will also be expressed from their standpoints. Through their presentations, guides into a new stage of nuclear development will be contemplated. After the three-day conference, technical tours to nuclear / thermal power plants are planned for April 21 to have good understanding of the present situation of power generation at the area. A Special Cultural Lecture on "A Zen Priest 'Ryo-kan' born in Niigata" will be made during luncheon on April 19.

The Annual Conference of JAIF, with its scale of 1,000 participants, has been well acknowledged not only among nuclear energy circles but also much wider fields of energy development and conservation. It provides a platform where top executives, specialists and general public express and exchange views and ideas on the issues concerned for further development of nuclear energy.

Program of the 38th JAIF Annual Conference

Main Theme: After Fifty Years of Nuclear Power, A New Stage for Safety and Trust
Date and Venue: April 18, 2005, Civic Hall, Kashiwazaki City, Niigata Pref.
April 19-20, 2005, Toki Messe, Niigata City, Niigata Pref.

Kashiwazaki Sessions	Niigata Sessions		Technical Tour
April 18 (Mon.)	April 19 (Tues.)	April 20 (Wed.)	April 21 (Thurs.)
9:30-10:30 Kashiwazaki Opening Session <Remarks> ○ JAIF Chairman ○ Senior Vice Minister for Educartion, Culture, Sports, Science and Technology ○ Minister for Science and Technology Policy ○ Senior Vice Minister for Economy, Trade and Industry ○ Mayor of Kashiwazaki City	9:30-10:00 Niigata Opening Session <Remarks> ○ Governor of Niigata Prefecture ○ Chairman of the Conference Preparatory Committee	9:30-12:30 Session 2 The Future of Asia in Rapid Economic Growth: and Nuclear Power Generation <Panel Discussion>	・Tour A: Kashiwazaki-Kariwa Nuclear Power Station etc. ・Tour B: East Niigata Thermal Power Station etc.
10:40-12:30 <Special Presentations> ○ Executive Leaders from Overseas and Japan	10:00-11:30 <Special Presentations> ○ Executives Leaders from Overseas and Japan		
12:30-13:45 Lunch	12:00-14:00 Luncheon ○ Special Cultural Lecture (Hotel Niigata)	12:30-13:30 Lunch	
13:45-17:45 Plenary Session Message from Kashiwazaki-Kariwa: Community, Environment, Energy and Our Lives <Presentations> <Panel Discussion>	14:30-17:30 Session 1 Requirements for Safety and Management: A 'My Plant' Attitude <Panel Discussion>	13:30-15:00 Session 3 Scenario for Completing the Nuclear Fuel Cycle <Presentations>	
		15:20-17:00 Q & A with the Citizens	
18:00-19:30 Reception (Civic Plaza)			

Program of the 38th JAIF Annual Conference

Main Theme: After Fifty Years of Nuclear Power, a New Stage for Safety and Trust

Kashiwazaki Session
(at the Main Hall, Civic Hall, Kashiwazaki City)

Monday, April 18

【Opening Session】 9:30–10:30
Chairperson: Tsunehisa Katsumata, President, The Tokyo Electric Power Co., Inc., Japan

Remarks:
- □ Jun-ichi Nishizawa, Chairman, Japan Atomic Industrial Forum, Inc. (JAIF), Japan
- □ Toshio Kojima, Senior Vice Minister for Education, Culture, Sports, Science and Technology, Japan
- □ Yasufumi Tanahashi, Minister of State for Science and Technology Policy, Japan (requesting)
- □ Sanzo Hosaka, Senior Vice Minister for Economy, Trade and Industry, Japan
- □ Hiroshi Aida, Mayor of Kashiwazaki City, Japan

【Special Presentation】 10:40 – 12:30
Chairperson: Tsutomu Kanai, Chairman, Hitachi Ltd.;
Vice Chairman, Japan Atomic Industrial Forum, Inc. (JAIF), Japan

Speakers:
- □ "Energy Policy and the Role of Nuclear Power Generation in France"
  Alain Bugat, Chairman & Chief Executive Officer, Atomic Energy Commission (CEA), France
- □ "U.S. Nuclear Energy Industry: A Solid Foundation, A Promising Future"
  Michael Coyle, Vice President, Nuclear Energy Institute (NEI), U.S.
- □ "The Role of Nuclear Operators in Nuclear Power Development in Japan"
  Yosaku Fuji, Chairman, Federation of Electric Power Companies, Japan

〈Lunch Break 12:30 – 13:45〉

【Plenary Session】 13:45 – 17:45

"Message from Kashiwazaki-Kariwa: Community, Environment, Energy and Our Lives"

Part 1: Presentation 13:45 – 15:30

Chairperson: Yo Kojima, President, Nagaoka University of Technology, Japan

Speakers:

- "Japan's Nuclear Energy Policy"
  Shunsuke Kondo, Chairman, Atomic Energy Commission of Japan
- "What is the SAFETY we are Looking for?"
  Hiroo Shinada, Mayor of Kariwa Village, Japan
- "Journalism in Nuclear Siting Areas"
  Takao Komachi, Editorial Writer, Niigata Daily, Japan
- "Cooperation between the Nuclear Power Plant and the Region/University Surrounding the Plant"
  Norio Tamura, Professor, Graduate School of Science and Technology, Niigata University, Japan

Part 2: Panel Discussion 15:45 – 17:45

"All the More Because We Together Live in a Town with a Nuclear Power Station"

Moderator: Etsuko Akiba, President, ASCA Energy Forum, Japan

Panelists:

- Yoshiko Arano, Chairperson, Local Conference to Maintain Transparency of the Kashiwazaki-Kariwa NPS, Japan
- Minoru Fuse, Director, Division of Disaster Prevention and Nuclear Safety, Kashiwazaki City, Japan
- Hiroshi Kawaguchi, Member of Committee for Nuclear Power, Kashiwazaki Chamber of Commerce and Industry, Japan
- Seiichi Taneoka, Vice President, Tokyo Electric Power Workers Union, Japan
- Katsuko Utashiro, Representative, Hakuto's Club – Citizens' Circle Looking Closely at Life, Japan

◇ Summary of Kashiwazaki Session by Japan Atomic Industrial Forum (JAIF)

【Reception】 18:00 – 19:30 (at the Umi-no Hall, Civic Plaza)

Niigata Session
(at the Toki Messe Snow Hall, Niigata City)

Tuesday, April 19

【Opening Session】 9:30 – 10:00
Chairperson: Keiichi Makuta, President, Tohoku Electric Power Co., Inc., Japan

Remarks:
- □ Hirohiko Izumida, Governor of Niigata Prefecture, Japan
- □ Akira Hasegawa, President, Niigata University, Japan

【Special Presentation】 10:00 – 11:30
Chairperson: Yumi Akimoto, Chief Executive Emeritus, Mitsubishi Materials Corp., Japan

Speakers:
- □ "A New Era in Communications and Public Support For Nuclear Energy in the United States"
  Ann Bisconti, President, Bisconti Research, Inc., U.S.
- □ "The Energy Issues and the Future Direction of the Nuclear Industry of the U.K."
  Michael Parker, Chief Executive, British Nuclear Fuels (BNFL), U.K.
- □ "Redefining Roles of Atomic Energy Research and Development"
  Toshio Okazaki, President, Japan Atomic Energy Research Institute (JAERI), Japan

【Luncheon】 12:00 – 14:00 (at the Hisho Room, Hotel Niigata)

Chairperson: Jun-ichi Nishizawa, Chairman, Japan Atomic Industrial Forum, Inc. (JAIF), Japan

〔Special Cultural Presentation〕
"Ryôkan (1758-1831): His Life and Calligraphy
Kiichi Kato, Director, Ryokan Research Institute,
Professor Emeritus, Niigata University, Japan

〈Lunch Break: 11:30 – 14:30〉

【Session 1】 14:30 – 17:30

Requirements for Safety and Management: A 'My Plant' Attitude

Chairperson: Haruki Madarame, Professor, University of Tokyo, Japan

Keynote Speaker:

- "How Nuclear Power Plant Safety should be in Place and How its Operation should be Managed"
  Michio Ishikawa, Former Professor of Hokkaido University, Japan

Panelists:

- Tetsuo Hashimoto, Professor, Niigata University; Member, Niigata Prefectural Committee for Monitoring and Evaluation of Environmental Radioactivity surrounding Nuclear Power Plants, Japan
- Hideaki Suzuki, Managing Director, Japan Atomic Power Co., Japan
- Masamitsu Takashima, Officer, Social and Industrial Policy Dept., The Federation of Electric Power Related Industry Worker's Unions of Japan
- Ichiro Takekuro, Managing Director, Tokyo Electric Power Co., Inc., Japan
- Koji Yamashita, Deputy Director-General for Safety Examination, Nuclear and Industrial Safety Agency, Ministry of Economy, Trade and Industry, Japan
- Enrico Fermi Nuclear Power Plant, Detroit Edison Co., U.S.

Wednesday, April 20

【Session 2】 9:30 – 12:30

"The Future of Asia in Rapid Economic Growth: Increasing Energy Demand and Nuclear Power Generation"

Chairperson:
Keiji Kanda, Director, Japan Energy Policy Institute; Professor Emeritus, Kyoto University, Japan

Keynote Speaker:

- "Outlook for Nuclear Power Development Among Japan's Asian Neighbors" (tentative) Keiji Kanda, ditto

Panelists:

- Masaharu Fujitomi, President, Asia Pacific Energy Research Centre, The Institute of Energy Economics of Japan

- Takahiko Ito, Vice President, Chubu Electric Power Co., Inc., Japan
- Suk-joo Jhun, General Manager of Project Department, Project Division, Korea Hydro-Nuclear Power Co., Ltd., Korea
- Sueo Machi, Commissioner, Atomic Energy Commission of Japan
- Masao Niwano, Chairman, Nuclear Energy Steering Committee, Japan Electric Manufacturers' Association; Corporate Senior Vice President, Toshiba Corporation, Japan
- Tran Chi Thanh, Senior Researcher, Nuclear and Thermal Power Department, Institute of Energy, EVN, Vietnam
- Feng Xin, Department of Nuclear Power, China National Nuclear Corporation, China
- Tadao Yanase, Director, Nuclear Energy Policy Planning Division, Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry, Japan

〈Lunch Break 12:30 – 13:30〉

【Session 3】 13:30 – 15:00
"Scenario for Realizing the Nuclear Fuel Cycle"

Chairperson: Hiroyuki Torii, Professor, Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, Japan

Speakers:
- "Bearing Fruit in the Nuclear Fuel Cycle Business" (tentative)
  Yoshio Hirata, Vice President, Japan Nuclear Fuel Limited, Japan
- "Prospects for FBR MONJU and Advanced Fuel Recycle Development"
  Yuichi Tonozuka, President, Japan Nuclear Cycle Development Institute (JNC), Japan
  "The Current Situation and Perspectives in Russia of Research and Development of Fuel Recycling Systems with the Utilization of Fast Breeder Reactors" (tentative)
  Alexander. V. Bychkov, Director of Chemical Technology Division, Research Institute of Atomic Reactors(RIAR), Russia

【Questions and Answers from the Citizens】 15:20 – 17:00

By the time of this session, the 38th JAIF Annual Conference will have been underway for most of three days, addressing major issues facing nuclear power and society itself. Desiring not only to be "open to the public", but to help the public understand various nuclear issues in a meaningful context, there has been a special focus

on the role of the Kashiwazaki-Kariwa area in nuclear development and use. In this session, the people will be able to ask questions and speak out about the presentations and discussions at the conference, which makes the session a meaningful opportunity in regard to Japan's nuclear development and use.

Moderator: Naoko Ando, Goodwill Ladies of Niigata City (Port Queen Niigata)

Coordinator: Yoshiko Tsuchiya, Freelance Newscaster, Japan

Commentators:

- Yuki Aomi, Advisory Specialist for Consumer Affairs, Japan
- Ann Bisconti, President, Bisconti Research, Inc., U.S.

◇ Summary of the Conference.

Monday, April 18

Kashiwazaki Opening Session

Remarks

9:30-10:30

Chairperson

Tsunehisa Katsumata, President, The Tokyo Electric Power Co., Inc., Japan

Remarks

[MEMO]

Monday, April 18

Kashiwazaki Opening Session

Special Presentations

10:40-12:30

Chairperson

Tsutomu Kanai, Chairman, Hitachi Ltd.;
Vice Chairman, Japan Atomic Industrial Forum, Inc. (JAIF), Japan

Energy Policy and the Role of Nuclear Power Generation in France

Alain Bugat
Chairman & Chief Executive Officer,
Atomic Energy Commission (CEA), France

I am convinced that nuclear energy is today at the dawn of a new phase of its development, as suggested by the general theme chosen for this 38è edition of Jaif International Conference : "After fifty Years of Nuclear Power, a new Stage for Safety and Trust". As a consequence, a real challenge is to be addressed by the nuclear community. After having gathered a considerable international experience, as well as scientific, technological and industrial, how is it possible to gain the necessary trust and confidence from the public. Energy policy is more and more a matter of public concern and open debates closely associate our fellow citizen upstream important decisions in this field.

To answer the concerns of french public, who considered itself poorly informed on the energy questions, French Republic President has committed himself to initiate a vast debate, at the time of his re-election in 2002. As a result of this debate the French government proposed a preliminary draft of a law which is currently under for examination by the members of Parliament.

In the context of the preparation of this law, the importance of nuclear energy in the "energetic mix" and the decision to prepare the renewal of the current park by authorizing EDF to build a first EPR reactor in France has been confirmed.

In addition, in 1991, a law related to radioactive waste research has been enacted, this law is known as "Bataille law". In order to give time to the scientific community to undertake the necessary research, it had been decided to fix the term of a new assessment in 2006.

The research undertaken in this framework has confirmed the benefit of the spent fuel reprocessing-recycling strategy in terms of waste management. Morever, new prospects in the field of partitioning and transmutation have been opened as well as to long term interim storage of nuclear waste.

U.S. Nuclear Energy Industry: A Solid Foundation, A Promising Future

Michael Coyle
Vice President, Nuclear Energy Institute (NEI), U.S.

Nuclear energy supplies affordable, reliable, emission-free electricity to one in five homes and businesses in the United States. The electricity produced by nuclear energy helps protect America's energy supply. Over the past decade, the U.S. nuclear energy industry has increased significantly the efficiency and productivity of its 103 commercial reactors. At the same time, we have continued to improve safety and security, because we recognize that it is essential in everything we do. In addition, a strong safety culture is necessary for improving plant operations.

The future of nuclear energy in the United States is looking increasingly positive. There is significant and growing support within the government, the general public and the environmental community. Recognition of nuclear energy's ability to produce reliable, affordable electricity without emissions has earned it many supporters, and has renewed interest in building U.S. nuclear power plants. U.S. energy companies are already testing regulatory processes for new plants, with support from the U.S. Department of Energy. The United States is not alone in its pursuit of new plants—recognizing the benefits of nuclear energy, many countries are pursuing new plants.

The Role of Nuclear Operators in Nuclear Power Development in Japan

Yosaku Fuji
Chairman, Federation of Electric Power Companies, Japan

The history of nuclear power development in Japan has been characterized by the peaceful use of nuclear power, since the Atomic Energy Basic Law was issued in 1955. Japan's first nuclear power station started commercial operation in 1966. To the present date, 54 units of nuclear power plants have been constructed in Japan. While the first nuclear reactor ceased its operation, 53 reactors provide approximately one-third of Japan's electricity supply.

The Basic Program for Energy Supply and Demand, put forward by the government in October 2003, emphasizes the importance of the secure supply of energy and the harmonization with the environment. Based upon the benefits of stable supply and negligible greenhouse gas emissions, the Program states that nuclear power should be promoted as an essential source of electricity, while placing particular attention upon safety issues.

Japan maintains the nuclear fuel recycle policy as a result of the shortage of energy resources. Members selected by the Atomic Energy Commission have been engaged in comprehensive discussions about revising the "Long-Term Program for Research, Development and Utilization of Nuclear Power" since June 2004. In the course of their discussions, they concluded again that our country should support the nuclear fuel recycle policy whereby the nuclear industry is responsible for introducing MOX fuel in operating reactors, promoting the construction of a commercial reprocessing plant and a MOX fuel fabrication plant in Rokkasho Mura, Aomori, and constructing an interim storage facility for spent nuclear fuel in Mutsu City, Aomori.

As global energy demand continues to rise, especially in the Asian region, the position of nuclear power should rise concomitantly to meet this demand. Our country must take advantage of nuclear power to stabilize the global energy balance and to preserve the global environment.

We, the electric power companies in Japan, should play an essential role to promote nuclear power, while focusing upon safety and maintaining the confidence of the local community and the general public. We and the nuclear industry in Japan face fundamental issues, including, but not limited to, the management of aging problems, the improvement of the capacity factor of nuclear power plants, the establishment of radioactive waste disposal with reasonable criteria. In order to maximize the benefits of

nuclear power, industry-wide efforts are required to resolve these issues. The industry and the government must continue the transparent operation of nuclear development, in order to preserve international trust in Japan's peaceful policy of nuclear promotion.

[MEMO]

[MEMO]

Monday, April 18

Plenary Session

Message from Kashiwazaki-Kariwa: Community, Environment, Energy and Our Lives

Part 1: Presentation

13:45 – 15:30

Chairperson

Yo Kojima, President, Nagaoka University of Technology, Japan

Since construction began on Unit 1 in 1978, Kashiwazaki-Kariwa, now with seven reactors, has grown into one of the leading nuclear power plant siting communities in the world. Having supported nuclear power generation for so long, the communities of Kashiwazaki-Kariwa manifest both pride in the importance of their responsibility as electricity providers to the nation, and frustration at the range of problems typically associated with that role. Reflecting many of the complications of society, what has emerged is an understanding that while some issues – environmental protection, energy supply, the future of nuclear generation – are best addressed by not only the national government and nuclear industry, but also local municipalities and even citizens.

This session will use the opportunity of our being in the city of Kashiwazaki to look broadly at issues – environment and life, co-existence/co-prosperity – from the viewpoints of local citizens and other concerned parties. In Part 1, after a presentation on the government's nuclear measures and basic policies, local parties will speak about what they think the relationship between nuclear generation and their communities should be. In Part 2, for the purpose of disseminating opinions from a siting area, using familiar examples and problems, incorporating what was discussed in Part 1, and with participation by a range of local residents, the relationship between daily life and energy/nuclear power will be further explored. National and regional security (including supplies of energy/electric power), fermenting a sense of "ease" about nuclear power, and other issues will also be taken up.

Japan's Nuclear Energy Policy

Shunsuke Kondo
Chairman, Atomic Energy Commission of Japan

What is the SAFETY we are Looking for?

Hiroo Shinada
Mayor of Kariwa Village, Japan

Some people say: Nuclear power plants benefit the earth life, because they ensure the stable supply of energy and reduce the amount of greenhouse gas emissions.

BUT

Other people say: Nuclear power plants are harmful to the earth, because of radioactive contamination and "uncontrollability."

There have historically been pros and cons on nuclear power generation, with the "theme of securing the energy source (electricity)" and the "theme of securing nuclear safety" discussed separately at cross-purposes.

Safety is indispensable to peaceful life. Yet, to achieve a peaceful life, we should address the issues, such as food, air, security, medicine, transportation, education, etc. etc. There is simply no end to the list.

Safety is the first requirement of the area hosting a nuclear power plant. The foremost task is to solve the question: "Who will ensure what safety and in what way" to deal with the danger of generating power through nuclear energy.

If the competent authorities impose strict regulations on nuclear operators and take local people's opinions into consideration, is that enough to protect the public from radioactive hazards?

On the other hand, we should also ask "who would secure what safety and in what way," in response to an crisis of an impending energy (electricity) shortage in the consumption center.

On the whole, the shortage of energy would bring about a sharp rise in commodity prices, a decline in international competitiveness, and unemployment. In addition, a power failure occurring in some regions would have grave impacts on transportation, medical treatment, information, peace and order, and so on. The only solution to this is to keep generating electricity.

We would think that the area hosting power plants has a mission to provide the stable supply of electricity. How can the consumption center cooperate and what role can it play in meeting the absolute requirement of ensuring safety in electricity supply?

Given the distance between the production and consumption centers, as electricity is sent all the way from here in the area of Tohoku Electric Power Company, to the consumption center in Tokyo, we would like to consider how both sides should work on the task of ensuring safety.

Journalism in Nuclear Siting Areas

Takao Komachi
Editorial Writer, Niigata Nippo, Japan

Niigata Nippo has been published since 1942 and enjoys the largest circulation in Niigata Prefecture.

From the beginning, the paper has had a branch office in Kashiwazaki City, and has reported on nuclear-related issues from there since the city began its effort to get Tokyo Electric Power Co. to site the Kashiwazaki-Kariwa Nuclear Power Station.

I personally reported from the Kashiwazaki branch for three years starting in April 2000. And I think I can say they were three very eventful years.

In May 2001, the village of Kariwa held a citizens' referendum on the use of MOX fuel. At about that same time, fraud in the use of grants under the three laws on power -source siting, for construction of a life-long learning center in the village, also came to light.

In August 2002, Tokyo Electric Power Co. was caught having attempted to hide problems at its nuclear power plants, and doubts increased among citizens as to whether the plants were being operated safely. Then the city of Kashiwazaki – financially dependent on nuclear-related revenues and watching as those revenues declined – decided to impose a "spent fuel tax ," the first ever by a municipality, to recover some of that revenue.

Looking back, I am most struck by the fact that these nuclear incidents, which affected policy for the whole country, occurred one after another.

In those circumstances, my basic attitude toward nuclear reporting could be distilled down to two points. First: Report anything related to the safety of nuclear power plants in minute detail. Safety, and whether it is being fully secured, is what most concerns local residents. The mission of the newspaper, I thought, was to provide safety-related information in detail to the residents. I did this, I must say, also with the expectation that Tokyo Electric Power Co. would, through our coverage, be conscious of the perspective of the local residents, and would work to create a positive internal "tension" – overcoming complacency – when it came to safety.

Second: Tell the story of the relationship between the nuclear power plants and the local community. Throughout the Kashiwazaki-Kariwa area, social and physical infrastructure were developed and improved as a result of constructing the nuclear plants. Nuclear power indeed meant "energy" for the community. Yet it is also true that the economic effects diminished as time went by.

Those changes – the fading of positive economic effect – have produced various distortions. The most notable one, perhaps, was Kashiwazaki's bold step of imposing its

spent-fuel tax to shore up its sagging finances.

Nuclear power plants have tremendous effects on local administration and economies. In trying to decide the kind of community the people in the Kashiwazaki-Kariwa area want to have and to be, the presence of the nuclear plants cannot be ignored. Believing the most important task of the newspaper with the largest number of local readers was to verify the role the nuclear power stations play in the community, I immersed myself deeply in reporting nuclear affairs there.

Cooperation between the Nuclear Power Plant and the Region/University Surrounding the Plant

Norio Tamura

Professor, Graduate School of Science and Technology, Niigata University, Japan

The nuclear power plant has large immediate impacts, both positive and negative, on the life, economy and many other aspects of the community adjacent to it. It is therefore important to promote coexistence/cooperation between the two based on their relationship. In this environment, we cannot deny that there is apparently a precarious relationship between the plant and nearby residents and municipalities. On the other hand, a number of seeds for cooperation and motivating factors have presumably developed. Accordingly, the cooperation between university and plant should take into consideration not only their direct relation, but also the connection with nearby municipalities and people as an important element.

The Kashiwazaki-Kariwa region in Niigata prefecture hosts Tokyo Electric Power Company's Kashiwazaki-Kariwa nuclear power plant, one of the largest plants in the world. Taking positively the region's strong interest in advanced science and high technology as well as the environmental issues surrounding them, the Graduate School of Science and Technology of Niigata University established the Regional Cooperation Center for advanced science and technology, as a base to become the nucleus of diversified cooperation between the region and the industry and the university. The philosophy of this center is as follows:

- **To become the base for research in the most advanced medical technology and basic science technology and for the development of human resources, through the combination of the vitality of regional municipalities and businesses and the research and education activities at the university.**
- **To become the base for transmitting education/research and information at Niigata University into the region.**
- **To become the base for interdisciplinary research in advanced medical treatment and physics, biology, engineering, etc.**

The center is aiming at building a research base for agricultural biology to develop high-quality farm products through cooperation with the regions utilizing warm wastewater from a nuclear power plant. The center is also planning to do research in neutrino oscillation using neutrino released from reactors, which has drawn attention in the fields of elementary particle physics worldwide, and promoting cooperation in the cancer treatment project using an accelerator. These specific projects are all based on cooperation with both municipalities and nuclear power plants.

With the funding from Tokyo Electric Power Co., the Graduate School of Science and Technology will also establish an endowed program, "Global Warming Regional Study" (TEPCO), beginning in the next school year. This program aims to further vitalize the research for solving the problem of global warming, through cooperation with the existing course for studying the consequences of global warming.

I will introduce in the lecture an example of cooperation at Niigata University, which we have planned, and worked to realize, in consultation with TEPCO's Kashiwazaki-Kariwa nuclear plant and municipalities in the region.

[MEMO]

[MEMO]

Monday, April 18

Plenary Session

"All the More Because We Together Live in a Town with a Nuclear Power Station"

Part2: Panel Discussion

15:45-17:45

Moderator

Etsuko Akiba, President, ASCA Energy Forum, Japan

Much More Communication Is Needed

Yoshiko Arano
Chairperson
Local Conference to Maintain Transparency
of the Kashiwazaki-Kariwa NPS, Japan

What has happened so far

I have heard that , unlike other nuclear power stattions, Kashiwazaki -kariwa station was built on the request of the local residents who wanted to facilitate the local economy. However, because the discussions during the decision making process were so intense, once the decision was made, the nuclear plant became a such sensitive subject that people stopped talking about it.

It may be that everybody wanted to avoid further arguments and friction. The local government and the Chamber of commerce took the initiative in promoting nuclear power generation further from their own positions, while some of the local people continued protest activities, but the majority let the pro-nuclear people or entities, such as the national government, and Tokyo Electric Power Co.(TEPCO) to make important decisions.

Therefore, I must say, there has been no place for ordinary citizens like ourselves to express our views which do not fall on either side.

What is going on now

With the end of the bubble economy, the disparity between the national government policies and the public needs has become apparent in many areas such as medical services, security, food, financial systems, education, social welfare, environment and nuclear power. Such disparity has led to a number of unexpected incidents, many of which still exist today.

"Local Conference" was formed when the problem of data falsification by TEPCO was discovered. The group consists of twenty-four members and manages its own activities. Some of the members represent different opinions, i.e. pro-nuclear or anti-nuclear, while others represent local communities. Many unexpected problems came up after we established the conference and monthly meetings became necessary, which was much more frequent than what we initially planned. Every meeting was an intense argument, and the conference has come to bear a huge responsibility.

The significance of our conference is to provide and communicate information from the people's point of view. By not forcing the prepared information but by disclosing the actual discussion, we hope that what we make available to the public would be perceived positively and be taken into account when making decisions.

Nevertheless, we still face many challenges to overcome, and we need to continue our work to follow that track. We cannot go back. Now is the chance to change.

Small they might be, we see signs of gradual changes in the government polices and the TEPCO management.

What is going to happen from now.

As a new, unprecedented type of group, and as a new information channel, the conference must keep its position neutral and always see things from the public's point of view. It also needs to remain focused on its goal, which is to make the community a safer and more comfortable place for everyone to live.

The public education on nuclear energy utilization must be facilitated so that people can make judgments based on the various information provided by the government, TEPCO, our conference, and others. Such education for children is particularly important and must be done urgently.

Moreover, the information must be shared to a greater degree, and the explanations on details need to be given more openly. And these have to be done not only for the local residents of the host communities but for everybody in the country. It is our belief that if such an approach is taken and strengthened continuously, the public trust can be earned along that process.

We strongly request the disclosure of more nuclear information including risk factors, with a help of press from time to time. We also expect the promotion of government policies and business management policies in which we can clearly see where the responsibilities lie and by when the problems will be solved.

We Think in Our Hometown Where A Nuclear Power Plant Stands

Minoru Fuse
Director, Division of Disaster Prevention and Nuclear Safety
Kashiwazaki city, Japan

The degree of trust by the public toward nuclear power plants which was observed through the earthquake incident

The earthquake helped us understand the depth psychology of the public toward the nuclear power plants.

- Thousands of phone calls rushed in to protest the fact that the seismic intensity at Kashiwazaki was not broadcast. That uneasiness turned into a rumor, i.e. "the government does not make the information available because a nuclear plant is there."
- Thousands of phone calls rushed in to protest the continuation of plant operation while the aftershocks still continued.

Judging from these phenomena, we have to say that the public trust toward the government, which was lost by the "troubles-hiding incidents" discovered in August 2002, has not been restored.

Making the information available and the role of the news media

Although the nuclear related information has become far more available to the public in recent years, one must wonder why the public trust has not been completely restored yet. We thought that the trust can be regained by making the information thoroughly available.

However, when a nuclear plant announces every single incident that happens inside, inevitably the ones with no safety significance get to be included, and yet the press could still report them, often giving an unfavorable impression that they are serious troubles. As a result, in newspapers, we see troubles happening at nuclear power plants almost every day.

If all the "incidents with no relations to safety" or "incidents that have little safety significance" continue to be reported as serious problems, it is only natural that the public start to think at their subconscious level that a nuclear plant is "a place full of troubles."

At the moment, we are asking the government to determine the level of information to be shared with the public. We strongly request to all parties involved in the nuclear industry to strengthen the dialogues not only with the general public, but with the media people as well.

In a City with Nuclear Power Plants, We Think . . . .

Hiroshi Kawaguchi
Member of Committee for Nuclear Power
Kashiwazaki Chamber of Commerce and Industry, Japan

I have been involved in nuclear issues since 1986. What I have learned from my experience is that the presence of nuclear power plants here indeed began with local efforts to invite the company to construct them, and that a great love for our home lies at the root of a wish for development of the area through associated sources of revenue and other considerations connected with the construction, while at the same time making a contribution to national energy policy.

Siting areas used to enjoy the advantages of development of infrastructure, and great spillover effects and synergy for local economies, thanks to a sufficiency of financial resources and expanded employment.

At present, however, they are suffering from common problems due to people's generally low awareness of energy issues, and they are worried about the future of the nuclear fuel cycle and the accumulation of nuclear spent fuel. Nuclear power plants, in their nature, can be operated safely, but these days we see accidents and problems arising from improper operation and management – for example, the thinning of piping walls.

In these circumstances, we, the people in siting areas, began thinking afresh about responsibilities when inviting nuclear power plants. We think responsibility should be borne jointly by the government, companies, local administrations and local communities. Nuclear power plants must be operated safely, and a national consensus on nuclear and energy policies should be developed.

Nuclear power plants play an important role in securing a stable supply of energy for the nation, and are essential in current circumstances. Locally, I think we are doing our share in contributing to national energy policy.

In this light, I think the government and the companies – from their respective positions – should positively take up the desires of local communities, and promote measures for better co-existence with siting areas. I think that while the government should strengthen the management of companies and measures for regional development, companies are required to positively substantiate co-existence with local communities.

For siting areas, true safety and "feeling safe" mean that nuclear power plants, in their co-existence with their communities, are physically and operationally sound, and transparent to the public. A consistent, unified nuclear fuel cycle will be implemented as soon as possible under the robust initiative of the government.

As the Ones Who Work at the Kashiwazaki-kariwa Nuclear Power Station from the Viewpoint of the Workers Union

Seiichi Taneoka
Vice President, Tokyo Electric Power Workers Union

[The principle of the Tokyo Electric Power Workers Union toward nuclear power]

Because electricity is an essential energy source that support our daily lives and industrial activities, we, as the ones involved in the electric power generation, have always worked very hard to fulfill the social responsibility given to us. We have worked with nuclear energy since 1950's. The basic understanding of the Tokyo Electric Power Workers Union, which consists of the workers of its nuclear power plants, is that "along with the diversification of energy sources, the nuclear power generation is critical for Japan to secure a stable energy supply, because its energy supply structure proves to be extremely fragile. Considering the global environmental problems and the demand for energy in the world, we must promote the utilization of nuclear energy as the first and main alternative to the fossil energy, while trying to save the energy at the same time." Based on such understandings, and on our belief that honest and continuous efforts will win the public trust, our union has defined the following principles and acted upon them.

- The Workers Union has a social responsibility to run the nuclear plants safely, and the promotion of nuclear energy must be based on continuous efforts to improve safety.
- If nuclear energy is something that poses a thread to our environment, we should not be part of it. If there is a risk of harming the health of the residents in the region and of the people who work inside nuclear plants, we must make our own decisions to terminate the construction, or to stop the reactor operation, and to secure the safety with our own hands.
- We need to manage and guarantee the complete safety from radiation of all workers at nuclear power plants.
- Nuclear power plants cannot be accepted without the effect they bring to the local economies, and thus it is essential for them to work together with their host communities.

[The activities of the Union after August 29th , 2002]

However, it became necessary for us to review our activities due to disgraceful incidents disclosed on August 29th , 2002, such as "an inappropriate handling of inspections and repair works," and we have worked very hard at every part of our workplace on following points:

- To further strengthen the union's function to check the company management, and

actively submit our opinions on various company policies determined by the management such as "creating such culture in the entire company and in every workplace that rouse the awareness of its social responsibility," "making the company and each workplace more open so as to facilitate the communication," "establishing company ethics and strengthening its checking function," "sharing more information that related to the company management in general to earn the trust of the host communities," and "changing our organization to such that operates strictly and fairly, and strengthening the cultivation and education of human resources."

- To create a system that stimulates communications and an environment that is comfortable and open in order to reflect the voices of the people who work at or whose works are related to TEPCO to the aforementioned policies accurately and in quantity.
- To define our own code of conduct and to educate or enlighten the union members to follow the rules and meet the expectations of the society.

[As the one who is involved with nuclear power generation]

As a person who was born and raised in Kashiwazaki, and has worked in places related to nuclear power for the past thirty some years, I now feel stronger than ever as follows:

Any person who is involved with nuclear power generation must

*always work with a honest and modest attitude.

*be able to communicate to everyone about what is happening inside the nuclear power plants in an easy-to-understand way and/or language.

*be aware of the importance of two-way communications with the society in a most honest way.

As the ones involved in electric power generation and nuclear energy, while learning from the opinions of the local people, we are determined to do our jobs as a union, to fulfill our responsibilities to the society.

We Always Concern about Nuclear at Our Town.

Katsuko Utashiro
Representative, Hakuto's Club
Citizens' Circle Looking Closely at Life, Japan

Live at nuclear town

The Kashiwazaki-Kariwa nuclear power plant was constructed 35 years ago. In those days, the nuclear power plant and the surrounding community coexisted in total harmony, but in August of 2002, a string of scandals involving cover-ups at TEPCO nuclear facilities came began to surface. This was a great shock and the trust relationship with TEPCO began to crumble. Therefore, in regards to nuclear power, we must not rely solely on provided information but read other sources of information as well and seek out accurate sources of news about nuclear energy.

Hakutoh-no-wa

The 45 members, who represent the Hakutoh-no-wa party, gain accurate knowledge about nuclear energy as well as dispel false rumors. We research nuclear energy and electricity to ensure accurate information is being reported and how nuclear energy helps us in our everyday lives. We research the following nuclear energy activities:

"Nuclear disaster prevention"

The Hakutoh-no-wa party was creating a drill nuclear accident plan in the Kashiwazaki area with Nation, Prefecture and City but was temporarily stopped because of the Chuetsu earthquakes. In November 2004, a group of nuclear energy suppliers and consumers from all across Japan, including Kashiwazaki city and TEPCO, held a meeting to discuss the topic, "thinking nuclear disaster prevention from our life." As a result of this meeting, we learned about the importance of communities, news during a disaster, necessity of accurate information supply, and what happens at a nuclear power station during an earthquake.

"Nuclear fuel cycle"

In March 2004, the Hakutoh-no-wa party started preparations to research the nuclear fuel reprocessing plant in Rokkacho village, Aomori prefecture. We know the Nuclear Fuel Cycle Program recycles nuclear fuel by extracting plutonium from spent fuel. Additionally, we can't turn a blind eye to the plutonium thermal use problem in August of

2002. We cannot escape this problem because we live in a nuclear power station town. We would like to know more about the government decision-making policies immediately in regards to this nuclear energy problem.

"Session with TEPCO"

Recently, the Hakutoh-no-wa party had a meeting with the Nuclear and Industrial Safety Agency, Kashiwazaki-Kariwa security check office director and the Kashiwazaki-Kariwa regional managing director. This meeting was to discuss condition of TEPCO Kashiwazaki-Kariwa NPP and tsunamis along the Kashiwazaki coast. While this meeting provided excellent information, the storage of spent fuel continues to be of our utmost concern.

The Hakutoh-no-wa party would like to expand the wave of activities as citizens and we will pass along our knowledge to the surrounding community in hopes to keep good relations with consumers. We are aware that nuclear energy is advantageous to many people and we are proud to do our part in ensuring the safe creation and distribution of nuclear energy.

[MEMO]

[MEMO]

Tuesday, April 19

Niigata Opening Session

Remarks

09:30-10:00

Chairperson

Keiichi Makuta, President, Tohoku Electric Power Co., Inc., Japan

Remark

Hirohiko Izumida
Governor of Niigata Prefecture, Japan

Remark

Akira Hasegawa
President, Niigata University, Japan

[MEMO]

[MEMO]

Tuesday, April 19

Niigata Opening Session

Special Presentations

10:00-11:30

Chairperson

Yumi Akimoto, Chief Executive Emeritus, Mitsubishi Materials Corp., Japan

A New Era in Communications and Public Support For Nuclear Energy in the United States

Ann Stouffer Bisconti, PhD
President, Bisconti Research, Inc
Washington, DC, U.S.A.

The U.S. nuclear industry these days is optimistic and enthusiastic. Performance is much improved and excellent. Some difficult challenges have been met. The need for more nuclear energy is increasingly apparent. Public support is rising. Favorable statements are appearing from public officials, news commentators, and even some previous opponents. The industry is poised for growth.

A new era for communications and public support has begun, due to this positioning for growth. Public support is broad and growing but could be strengthened. Significant awareness gaps remain, especially about nuclear energy's clean air benefits. To build a solid foundation of public support for the prospective growth, the entire industry is being mobilized to participate in coordinated communications about nuclear energy's benefits.

As an observer of the industry for more than two decades, I see the new coordinated approach as a real change from the way communications were viewed used in the past.

In the early 1980s, after the shock of the Three Mile Island accident, the industry began a major national communications program about the benefits of nuclear energy that lasted for a decade. While this program was massive and effective, it was used primarily as a shield by individual utilities. The shield protected their assets and enabled them to avoid being associated individually with positive messages about nuclear energy. The public leaned toward support for nuclear energy during those years, but members of the industry, feeling the sting of harsh opposition from a small segment of the public, contributed by their statements to the perception that public opposition was widespread. This perception hung heavily over the nuclear energy future.

A second era for communications coincided with the onset of utility restructuring and competition in the mid-1990s. The industry focused inwardly on improving performance and externally on federal government policy. Nuclear Energy Institute (NEI) mobilized nuclear utilities for coordinated approaches that met these challenges successfully. However, industry communications were focused on policy issues such as Yucca Mountain instead of nuclear energy's benefits. As a result, public support, which had been rising, began to wane.

However, the successes in meeting the performance and policy challenges increased the marketability of nuclear energy and changed the industry vision. Combined with the ease of license renewals and the growing need for electricity and clean air, those successes encouraged the industry to adopt a vision in which new nuclear power plants will be built. In this new context, a few years ago, Nuclear Energy Institute (NEI) began benefits-focused communications—a Nuclear Energy Branding program.

This year, with Executive Committee agreement, NEI launched a drive for all nuclear utilities to participate in the new Nuclear Energy Branding program. Now, the coordinated action and common purpose that led to performance and policy successes are being applied to communications about nuclear energy's benefits. Communications about these benefits are envisioned at last as an integral part of the industrywide drive for success and growth, involving everyone.

The Energy Issues and the Future Direction of the Nuclear Industry of the U.K.

Michael Parker
Chief Executive, British Nuclear Fuels (BNFL), U.K.

The Nuclear industry in the UK was born in the mid 1940s and has gone though a number of significant changes during the past 60 years. On 1st April 2005 the industry in the UK underwent perhaps its most significant change ever as the UK Government implemented plans that have been developing steadily during the past 3 or so years and formed the Nuclear Decommissioning Authority (NDA). The NDA, has been formed to focus on the clean up of the UK's nuclear legacy whilst protecting the environment and providing the UK tax payers with value for money.

The formation of the NDA has meant a very significant change to the UK's leading nuclear company BNFL which was restructured on 1st April 2005 to provide the NDA with the services they require to meet their objectives whilst at the same time continuing plant operations at Sellafield to meet commercial needs. The BNFL Group has been restructured to focus on the UK's needs and also ensure that the Westinghouse Electric Company is in a strong position to actively compete in the growing worldwide markets of nuclear reactor services, uranium fuel supply and new reactor build.

The UK Government reviewed its energy policy in February 2003 and at that time made no clear commitment to developing nuclear energy in the UK. However during the past year the UK public has become more aware of the need to control carbon emissions and the media in the UK have increasingly pointed out the role that Nuclear Power can play in climate change and meeting the Kyoto protocol. A recent opinion poll has shown that the UK public is starting to recognise that nuclear power should be a major contributor to the UK energy supply in the future.

This presentation will explain the role of the NDA, and the changes made by BNFL to fully support its implementation. It will also explain the UK Energy policy and how BNFL views the prospects for Nuclear Energy in the UK and in other parts of the world.

Redefining Roles of Atomic Energy Research and Development

Toshio Okazaki
President
Japan Atomic Energy Research Institute

Recently, facing significant changes in the perspective of the energy security and the global environment, we have had significant events related to atomic energy: a series of discussions in the Atomic Energy Commission of Japan for the revision of the Long-Term Nuclear Program, which confirmed the basic policy of nuclear fuel recycling, the consent of the Fukui Governor to remodeling of Monju, the signing of the Framework Agreement aimed at the international development of Generation-IV nuclear energy systems, etc. In such a background, the Japan Atomic Energy Research Institute and the Japan Nuclear Cycle Development Institute will be integrated to the independent administrative institution, "Japan Atomic Energy Agency"* on October 1st this year.

The research and development of the new agency are considered to undertake the following roles:

(1) On the problems facing nuclear energy utilization, we shall extend technical assistances on requests from the government, the local administrations and the private businesses.
(2) We shall provide technical options to attain political goals on securing medium-to-long term stable energy supply.
(3) With high potential of atomic energy, we shall pursue novel ideas and innovative technologies, explore new fields of science and technology, and prepare the technical infrastructure and the knowledge base for the sustainable development of atomic energy utilization.

The biggest and immediate challenge to the nuclear energy is to regain the credibility of the public. Through all our programs, special focus will be given to securing the safety of our own facilities. Our R&D, technical transfer, education and training, and sharing facilities will aim to advance the nuclear technology in close cooperation with private and academic sectors. Thus, we wish to contribute to regaining the credibility of the public and realizing the stable progress in the use of nuclear energy.

The new agency continues the R&D on the FBR cycle system in order to solve the problem of energy and environmental sustainability. Preparation for resuming Monju operation and the Feasibility Study on Commercialized FBR Cycle Systems are among

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* Provisional translation for the Japanese name of the new institution.

major priorities.

In the sphere of more fundamental R&D, we shall advance our programs on the nuclear hydrogen, the fusion energy etc. In the frontier of atomic energy utilization, we develop the quantum-beam technologies such as high-quality high-intensity neutron beam, which lead to the new fields of science as well as the innovation in industries.

[MEMO]

Tuesday, April 19

Luncheon

12:00-14:00

Hotel Niigata, the Hisho Room

Chairperson:
Jun-ichi Nishizawa, Chairman, Japan Atomic Industrial Forum (JAIF), Japan

Special Cultural Presentation

Ryôkan (1758-1831): His Life and Calligraphy

Katô Kiichi
President of Ryôkan Institute
Professor Emeritus, Niigata University

1. Ryôkan's Life

Ryôkan was born in Izumozaki village, Niigata prefecture, in 1758. His childhood name was Eizô, and after his ceremonial Coming of Age, he was called Fumitaka. After renouncing the world, he was given the name "Daigu Ryôkan" (Ryôkan the Great Fool). At the age of eighteen, Ryôkan took the tonsure and became a bonze under Genjô Haryô at Kôshôji Temple in Niigata. When he was twenty-two, he became a disciple of the famous Zen priest, Dainin Kokusen, and devoted himself to the austerities of Zen at Entsûji Temple in Okayama Prefecture. At the age of thirty-three, Ryôkan was granted *inka no ge* (a kind of graduation certificate) and he went on a pilgrimage throughout the country. At the age of thirty-nine, he returned to his homeland Echigo (Niigata prefecture). He wandered about empty temples in the region. At forty-seven, Ryôkan settled down at a temple named Gogô-an, on the fifth station of Mt. Kugami. When he was sixty, he moved to a hermitage of Otoko Shrine. Then, at the age of sixty-nine, he moved to the Kimura family's hermitage in Washima village. Ryôkan passed away on January 6, 1831, at the age of seventy-four.

2. Ryôkan's Humanity

Ryokan was a Zen priest of Sôtô sect. Following the teachings of Dôgen, the founder of Sôtô Zen, Ryôkan never had nothing throughout his life, a temple, a wife, or children. He was contented to live in honest poverty. Ryôkan is comparable to Prince Shôtoku in his faith in the Lotus Sutra.

Ryôkan wrote more than 600 Chinese poems. Lots of Japanese men of neligion like Karaki Junzô, Iriya Yoshitaka, Seizan Yanagida, highly praise him as the most "Japanese" poet.

Ryôkan composed over 1,300 Japanese poems. The Japanese prominent poet like Mokichi Saitô, HideoYoshino, Miyoji Ueda, extol him for perfecting his own Manyô style.

Ryôkan left more than 2,000 pieces of calligraphy, in which he wrote his own Chinese and Japanese poems. His calligraphy has been highly admired as the pinnacle of the Japanese style and the ultimate attainment of Japanese beauty.

Many anecdotes are told about Ryôkan, who bounced a ball and played hide-and-seek with village children. These anecdotes are adored by the Japanese in the same way as Ikkyû's witty stories.(Ikkyu was a Zen priest, 1394-1481)

In other words, Ryôkan's humanity, including his Zen, poetry, calligraphy, and

anecdotes about him, has been loved and respected by people all over the world.

3. Searching for his Way of Life in Ryôkan's calligraphy

(1) Beyond the clouds, a gentle wind full of merry is blowing. Tenjô: the place where all phenomena are at the final extremity

Daifû: Buddha's infinite and abundant love

I ask the priest Unmon, "What would happen when trees die and leaves fall?" Unmon answers, "Great dew, autumn wind." (Hekiganroku-Report). These four letters show the state of mency in the universe.

(2) Lotus Sutra Praise

"People always speak ill of the Lotus Sutra when they open their mouth, and also malign it when they close their mouth. Why shouldn't we praise the Lotus Sutra? Join our hands and chant Glory to the Sutra of the Lotus of the Supreme Law!" This is a contradiction in terms, but it shows the world of consistent.

(3) Words of Affection

"Words of affection come from the affectionate mind. The affectionate mind derives from the merciful heart. We should learn that words of affection often have the power to change the trend of the times."

(4) You have left oun hometown far away asking for alms for the Daizôkyô (a complete collection of Buddhist Sutras, Laws and Treatises). Alas, what could I say about that? The weather is getting cold. Please take good care of yourself. This is letter addressed to his disciple nun Ikyô.

(5) I wish the day would dawn soon end. When the morning comes, the woman will come and clean the lower part of my body. Until that time, I will keep tossing myself about in the bed because of the abdominal pain. I am unable to get though this long night. (A letter addressed to Yûshi)

(6) I have a good appetite for these days. I feel moisture in my mouth. (A letter addressed to Samon Tachibana)

[MEMO]

[MEMO]

Tuesday, April 19

Session 1

"Requirements for Safety and Management: A 'My Plant' Attitude"

14:30-17:30

Chairperson

Haruki Madarame, Professor, University of Tokyo, Japan

Light-water reactors are and will be the mainstay of nuclear power plants in Japan, a mature technology providing in excess of 30% of the country's total generated electricity. As the number of light-water reactors that have been in service for more than 30 years continues to grow, a shifting by nuclear parties of their financial, technical and human resources to the plant maintenance efforts becomes increasingly important. Combined with the decline in new plant construction, there is an increasing need for the well-organized maintenance and management of such reactors, in order to continue their safe, steady operation. With the awareness that "this is my plant" and, as the owner, "I will protect my plant," both corporate management and plant-site management must create a safety system, as their own responsibility, that allows making the best use of light-water reactors.

This session will consider such issues as safety culture and risk awareness, safety activities of on-site staff who are at the forefront in ensuring safety, and optimization of future maintenance and repair systems, including direct management of maintenance activities, drawing on good examples of operational maintenance and management of plant life overseas. In this way, we will look at what measures there should be for efficient use of existing nuclear plants, premised, as always, on ensured safety.

Keynote Speech

How Nuclear Power Plant Safety should be in Place and How its Operation Should Be Managed

Michio Ishikawa
Former Professor of Hokkaido University, Japan

In 1990s nuclear power plant safety and operation performance of Japan stayed at the top level worldwide. Now it has fallen to a miserable level. It is partly due to halted operation of many plants caused by repeated troubles and misconduct, occasional accidents. The question is whether or not sophisticated procedures of maintenance and practical operation management adequate to nuclear power plants have been in place. Performance indicators for nuclear power plant safe operation remain at a stable level over the past 10 or so years in Japan, whereas those in most other nuclear power countries are constantly improving worldwide. To understand why this is the case, it is necessary to start with analyzing the difference of operation practices in Japan and other countries. That will help identifying necessary measures to improve our operation performances.

Major difference in operation practices in Japan and other countries is noted in the following.

1. Regulations in Japan address mainly to safe design and manufacturing.

   Worldwide, regulations dedicated to operation management have been pursued. The attempts have turned out successful in maintaining remarkable operation performances. Lack of new plant constructions has, noteworthy enough, made this possible

2. Operation in Japan is often managed based on conventional thermal plant management practices.

   Operation management practices, like compulsory periodic annual inspections, developed for conventional thermal plants, have been widely applied to nuclear power plants as well in Japan. This approach has been effective for keeping satisfactory performance of nuclear power plant operation till 1990s. The fact that the basic technical principles are not based on "nuclear" features, however, has caused consequently Japan's nuclear power plant operation performance behind those of other countries.

3. Strict control tends to supersede rational and practical regulations in Japan.

   Mainstream of plant regulations worldwide lies in strictness in machineries (safe

design and installation) on one hand and in flexibility with higher human involvement in operation and maintenance on the other. Nuclear-related machine performance is requested to comply with much stricter specifications than those of conventional thermal plants. For operation and maintenance, on the other hand, which need more man-machine interface, managers are granted to assume higher discretionary authority in supervising their employees for increased incentives to ensure plant safety. By doing so, rational and practical regulations are practiced with balanced plant safety. The so-called "Safety Culture" is this very process to keep this balance. Nevertheless, Japan is being driven to strictly controlled regulations as a consequence of repeated troubles and misconduct, occasional accidents, a kind of isolated environment from worldwide practices.

Depressed operation performance of a techno-giant Japan may be a world wonder. As some pro-Japanese note, it may come from its social structure, unique and common to historic Asian culture. Apart from its correctness, the fundamental measure can be nothing but the deployment of operation management practices, compatible with those worldwide. Recovering public trust is the pre-requisite. The tempos of taking off the current low-gear performances depend solely on how nuclear industrials could make their best efforts with patience.

Reviewing once again of the safety and management of nuclear power plants -- the challenges to overcome to establish the mindset of 'My plant'

Tetsuo Hashimoto
Professor, Niigata University
Member, Niigata Prefectural Committee for Monitoring and Evaluation of Environmental Radioactivity surrounding Nuclear Power Plants, Japan

Kashiwazaki-kariwa nuclear power station of Tokyo Electric Company, which was constructed in the coastal area that extends over Kashiwazaki city and Kariwa village, started its operation in September 1985, and since then, it has expanded its capacity and now has eight reactors, of which total capacity stands at eight million two hundred and ten thousand kilowatts, making it the biggest nuclear facility in the world. Therefore the nuclear power stations in Niigata prefecture already have a history of twenty years.

Thirty years ago, I left Kyoto University's Research Reactor Institute, which is a facility shared by a number of universities, and came to work at the Science Faculty of Niigata University. The Faculty was well known for its research on hot particles (they are strong radioactive particles and named "the Giant Particles at Niigata University) created during the nuclear tests in the atmosphere in 1960's and 70's, and because the main subject of my research was the environmental radioactivity behavior, I was invited to join them. My involvement in Kashiwazaki -kariwa nuclear power station started when, some twenty five years ago, I collected a sample of sand from the area by the shore, where the reactor was planned to be built, for the research of the luminescence phenomena induced by radiation. I had learned a general concept of nuclear reactors from Professor Kanda while I was still at Kyoto University, so I always had an interest in nuclear power plants.

In 1993, I was designated to be a member of Niigata Prefectural Committee for Monitoring and Evaluation of Environmental Radioactivity surrounding Nuclear Power Plants as a representative of our university, and since then, I have served the membership for more than ten years. During that time, some negative incidents occurred, such as the sodium leakage incident at 'Monju ', a fast breeder reactor, which happened in 1995, the criticality accident at JCO in Tokai-mura in 1999, and the cover-up and falsification of the inspection/test data at power reactors of Tokyo Electric Power Company. With those, the things were turning only more difficult for the nuclear industry.

Due to repeated accidents and sorts, the concern of the people who live close to nuclear power plants reached its peak, and the plan to introduce a power reactor, Unit 3 of Kashiwazaki -kariwa, as a part of the plan to burn plutonium in thermal neutron reactors, had to be taken back almost to scratch. In 1996, the local referendum on the construction of Maki(巻) nuclear power station was denied because the majority of the voters opposed to the plan, and, in 2003, Tohoku Electric Company had to give up the entire plan.

For the past ten years, as an university person in the community, I have tried to find what I can do to facilitate the understanding of the scientific aspects of nuclear energy among the local people.

When we tried to establish the Niigata branch of Atomic Energy Society of Japan, I asked to find out the number of its members who live in the prefecture. The result was that, if we excluded the people from Tokyo Electric Company, we had only several. On the other hand, I learned that Fukui prefecture had three nuclear research institutes, and it also had a plan to found a graduate school in Fukui University to study nuclear technology. Therefore, a few years ago, we decided to start our diffusion activities. We started from the government, asking them to understand, through our committee, our current situation in which we have such a small number of experts and officials involved in nuclear energy in Niigata. We also started to promote the understanding of nuclear power, radiation, radioactive materials and so on among the public through our lectures and other activities. The university is finally beginning to move, but we still have a long way to go before the local people begin to consider the nuclear power plant as "our own facility in our hometown."

Safety of Nuclear Power Plants

Hideaki Suzuki
Managing Director
Japan Atomic Power Company, Japan

Our company's managing principles give the first priority to "Safety First" and all employees develop company wide safety activities. First of all, it is necessary to improve level of safety consciousness of both management and employees. In addition, as nuclear power plant operator, it is essential to improve level of technical capability in order to keep safe operation and maintenance of nuclear power plants. These are the main two principles for safety achievement of our company.

For improvement of safety consciousness, we think good communication throughout the company is most important from lessons learned from "spent fuel cask shielding material data falsification incident" caused by our subsidiary in 1998. We enacted the employee's action charter and have determined October, when the incident was revealed, as the safety consciousness enhancement month. In that month we are conducting variety of activities such as employee's safety consciousness survey to remind all of us of the lessons from the incident.

Another principle for safety achievement is improvement of technical level. In the early days of nuclear power introduction to Japan, utility employees went into the plants, looked at the equipments and recognized status of them. But gradually we are relying on plant makers. We think it is necessary for utility employees to go into the plants and touch the equipments by themselves as the elderly engineers had done. So we are promoting in-house maintenance work or maintenance work by ourselves.

Among in-house maintenance activities, equipment diagnosis was conducted first starting in 1999. Diagnosis of rotating equipments has been made for most of the equipments that can usually be accessed. We are positively working on certificate acquisition such as Machine Maintenance Technician, Vibration Analyst, and so on. Our Central Training Center is now applying for qualification of the training organization for the ISO Vibration Diagnosis Technician certificate. For welding inspection, our training center has established welding inspector certification system and the certified 13 JAPC inspectors are conducting all of the welding inspections by themselves.

For in-house maintenance work, 7 JAPC employees started the work in 2001. We gradually expanding number of people engaged and number of equipment inspected. For example, we dismantle, inspect and assemble large-scale equipments such as feedwater pump and motor by ourselves. The biggest advantage of in-house maintenance work is that our employees can propose review of maintenance interval, improvement of maintenance scope, etc. based on the results of inspection because they are not mere workers but engineers. Since they are always thinking the best way of work, positive

attitude is developed in them.

In addition to in-house maintenance work, we work on in-house equipment management. So far we have asked plant makers to inspect our equipments and we determined maintenance programs based on recommendations from plant makers. We are now going to measure and evaluate status of equipments by ourselves and based on our judgment we make the maintenance programs on our own initiative. We can not conduct all of the maintenance and inspection work by ourselves and we must utilize plant makers' specialties. So, appropriate role assignment between utility and plant makers is necessary.

We believe the approach described above greatly contributes to improvement of our company's technical capability. Through diagnosis, measurement, evaluation, inspection and maintenance programs development of equipments by ourselves, our employees will be attached to the equipments and they will conduct maintenance activities with eagerness and strong sense of responsibility.

MY PLANT Mindset is Essential for the Safe Operation of Nuclear Power Stations

Masamitsu Takashima
Officer, Social and Industrial Policy Dept.,
The Federation of Electric Power Related Industry Worker's Unions of Japan

1. Nuclear safety regulations and Safety

Nuclear plant operators are responsible for the safety of their operations. Whether regulations exist or not, that responsibility comes with any business operations that present certain potential risks to the society. In other words, the aim of regulations is not to reduce the operators' responsibility for safety. It is needless to say that the operators must autonomously work to secure the safety of their nuclear operations in order to prevent any serious disasters by taking measures based on the awareness that if they let an accident happen, it would cause a great deal of damage to both the plant workers and the local residents.

Labor unions, which give an absolute priority to the safety of workers in actual workplaces, ask for adequate regulations (involvement) by the national government and safety measures by the operators We, the unions, also think that if the safety of the plant workers cannot be assured, it would be totally impossible to assure the safety of the local people, let alone the nation's general public. Particularly, as the accident at Mihama nuclear power station of Kansai Electric Power Company showed us, if an accident occurs in a nuclear power plant, its workers are the ones that suffer first. An accident could present danger even to their lives depending on the degree of the damage. Thus, the utmost priority must be given to the safety in the workplaces within nuclear power plants. We are trying to figure out what is the best way to deal with the operators in particular who have the direct relationship with us unions, while we try to provide a function to check the safety level of our own works.

2. Nurturing the mindset of "my plant" and safety management

Because the maintenance, inspections and other types of work in nuclear power plants require a large amount of physical work and a very high level of technology and expertise, it has become impossible for their operating companies to complete the work on their own. Particularly, the works carried out during the outage maintenance require a cooperation and coordination (a shared concept of "my plant") between all parties including not only the venders who construct the plants but the other related companies and engineering companies in the area in order to assure that the plants are truly safe. But we have more than one nuclear power plant in Japan, so maintenance engineers and experts have to move from one plant to another in different parts of the country to do their jobs, and we have to say that this situation makes it difficult for everyone to share the mindset of "my plant."

Also, there are many layers of people related to a plant, from the electric companies that place

orders down to workers who do the actual works (a multi-layered structure), and this fact makes the work management and safety control more difficult. Smaller companies in particular do not have unions so we cannot even check whether they have a appropriate safety management system in place.

3.Desirable safety regulations and safety from the viewpoint of workers

As the subject of regulations, we expect such safety regulations that are appropriate, reasonable and effective. When we say "appropriate," we mean that the regulations are based on proven technologies and reflect the development of maintenance technology and of management methods. By "reasonable" we mean that the procedures required by the regulations are fair when compared with other types of social activities, practical when applied to actual works, and effective when enforced (optimization of regulations and inspections).

Outline of Presentation

Ichiro Takekuro
Managing Director; Deputy General Manager,
Nuclear Power and Plant Siting Division
Tokyo Electric Power Co., Japan

The most important element in establishing a safety-preservation system based on "self-responsibility" is keeping the focus on the plant sites themselves. This means increasing the sense of responsibility and capability of every party involved; understanding potential problems at plant sites and taking prompt, proper action. If so, the PDCA approach – Plan-Do-Check-Action – can function properly, thereby ensuring safety and quality at nuclear power plants, along with steady improvements.

In this context, Tokyo Electric Power Co. has been making various efforts at improvement. I will introduce some of them, referring to actual cases at TEPCO's Kashiwazaki-Kariwa NPS, in the following aspects:

(1) Improvements to activities at plant sites
- Committee on inappropriate management
- Improving environments at plant sites by joint promotion teams, in concert with cooperating companies
- Exchanging opinions with cooperating companies; discussions prior to starting work
- STAR activities

(2) Improvements in how jobs are carried out
- Activities by peer groups and peer teams
- Leadership training

(3) Thorough information disclosure
- Full disclosure of information on accidents and problems
- Providing information to local communities
- Sharing information with cooperating companies

(4) Management support of plant sites
- Disseminating messages from management
- Operations reviews including management
- Allocating resources
- Exchanging opinions with management

(5) Reviewing organizational systems

- Deployment of unit managers (reviewing management spans)
- Strengthening cross-sectional functions related to quality and safety
- Strengthening the quality auditing function

(6) Reviewing maintenance systems

- Complete review of maintenance systems

Current Status of Reforming Nuclear Safety Regulation in Japan

Koji Yamashita
Deputy Director-General for Safety Examination
Nuclear and Industrial Safety Agency (NISA)
Ministry of Economy, Trade and Industry, Japan

- Fundamental Reform of Safety Regulations in response to TEPCO's issues
  - Fulfillment of licensee's safety assurance activities
    - Establishment of licensee's QA systems
    - Introduction of licensee's periodical inspection
    - Obligation to conduct integrity evaluation
  - Implementation of effective nuclear safety regulatory legislation
  - Establishment of an incorporated administrative agency Japan Nuclear Energy Safety Organization (JNES)
  - Legal authorization of periodical safety review, etc.
- Policy Issues of Safety Regulations; Today and Mid- and Long-terms
  - Promotion of safety information disclosure and sharing
  - Revision of inspection rules by means of risk assessment and performance evaluation
  - Incorporation of latest scientific knowledge into safety regulation
  - Ensuring necessary human resources for nuclear safety, etc.
- NISA's actions in response to the KEPCO's Mihama Accident
  - Supervision of KEPCO
  - Piping erosion-corrosion controls
  - Strengthening and enrichment of reactor aging management
  - Reinforcing safety legislating management in Fukui Prefecture
- Intensified deal with Public Hearing and Public Information
  - Setting up Nuclear Safety Public Relations and Training Division in NISA
  - Positive implementation of public hearing and public information activities
  - Arrangement of Nuclear Safety Public Relation Local Officers

Enrico Fermi, Nuclear Power Plant, Detroit Edison Co., U.S.

[MEMO]

[MEMO]

Wednesday, April 20

Session 2

"The Future of Asia in Rapid Economic Growth: Increasing Energy Demand and Nuclear Power Generation"

9:30-12:30

Chairperson

Keiji Kanda, Director, Japan Energy Policy Institute;
Professor Emeritus, Kyoto University, Japan

Among Japan's Asian neighbors, including China and the countries of Southeast Asia, energy demand is expected to rapidly increase with the growth of their national economies. It is important for these countries to further develop and use nuclear power generation in order to realize the stable supplies of energy they will need, within the limitations of resources and restrictions imposed by concern for the global environment.

As for the present status of nuclear power generation in the region, Japan, South Korea and China have all gained experience operating significant numbers of nuclear power plants (81 units in operation, 9 under construction and 18 planned in total) and have strong intentions to export nuclear power reactors. Other countries, including Vietnam and Indonesia, plan to introduce nuclear power generation as one of their key energy sources in the future.

In this session, we will affirm the common recognition among experts in Japan and other Asian countries that development of nuclear power generation is necessary for the region to realize steady economic growth. Based on this recognition, we will discuss issues including nuclear non-proliferation, technology transfer and personnel infrastructure for the further expansion of nuclear power generation in the region. We will also consider future policies and the direction the nuclear industry should take, in line with the countries' individual nuclear development programs.

Keynote Speech

An Approach of Japanese International Nuclear Contribution
--- Non-proliferation, Legal Arrangements, Human Resources, TT ---

Keiji Kanda
Director, Japan Energy Policy Institute;
Professor Emeritus, Kyoto University, Japan

1. Background

Climatic change and the Kyoto Protocol effectuation, soaring oil prices, expanding energy demands in the Asian region and other relevant factors are greatly shifting the attitude towards nuclear power worldwide.

Japan plays a leading role in research and development of nuclear energy with full commitment to its peaceful use. Japan is a model country in the "Non-proliferation Regime" by full compliance with the IAEA Additional Protocol of Safeguards," physical protections and illicit nuclear trade controls. Japan assumes the point of contact representing the nuclear suppliers group. Safety management of nuclear facilities is continuously upgraded with necessary legal arrangements. Safety culture practices are constantly improved.

It will be Japan's obligation to help Asian neighbor countries getting necessary resources (hardware and software) in utilizing nuclear energy. It also contributes to the regional energy security.

2. JAIF's Committee on International Policy-planning Committee

International marketing of nuclear industry is one of the major pillars in the Recommendations, "Nuclear Vision 2050 and Roadmap thereto" and "Actions in Need in 10 years, " which the Japan Atomics Industrial Forum (JAIF) compiled in 2004. Two issues are identified therein: how to deal strategically with international marketing, and how to share responsibilities between private sectors and the government. Specifically, accelerated NPP constructions in China, projected NPP introduction in some Asian neighbor countries, and the NPP construction plans in the US market are recognized as items of immediate response needs.

JAIF set up a "Forum for Japanese International Policy-planning (provisional name)" in November 2004. Committee members are from industry, banks, insurance companies, trade companies as well as intellectuals, journalists and lawyers. Noteworthy is that several government managers also participate as observers. The committee's views are due to be reported in late April to the AEC's Committee on long-term energy policy

planning. Minister of METI issued recently a letter of support to bidding to China. Cooperation of the government and the private sectors is taking a shape.

3. Targets and Goals

Target countries for Japan's contribution are: US; China; and Asian neighbor countries such as Viet Nam or Indonesia. Specialized consortia are dealing with US and China.

Viet Nam shows the annual growth rate of more than 10% in electricity in resent years and it will continue to 2030 and beyond. A pre-feasibility study projects the absolute need of introducing nuclear power by around 2020 to meet this increasing demand. The government's authorization is being pursued.

GDP, energy demand and electricity demand in Indonesia are projected to increase by 2025 by a factor of 4.2, 2.0 and 4.3, respectively. Nuclear power introduction by around 2015 is believed necessary in order to meet these expanding demands.

Increasing demands for energy, in particular for electricity, in not only China and India but also other Asian countries such as Viet Nam or Indonesia are really remarkable.

Energy Demand and Nuclear Power in Asia

Masaharu Fujitomi
President, Asia Pacific Energy Research Centre
The Institute of Energy Economics of Japan

Primary energy demands in APEC is projected to grow about 2.1 percent annually over the next two decades. More than half of incremental oil growth comes from China and other Asian region, whereas 60% plus of its incremental coal demands is also from the Asian region. The dominant fuels today – oil, coal and gas – will remain the dominant fuels tomorrow. Oil dependency of the Asian region may soar to 80% from an already high 60% in twenty years to come. Electricity demand is also jumping, particularly in China. Strong energy demand growth in Asia and North America, geopolitical instability in key energy exporting economies, and constraints on infrastructure to deliver energy sources to the market, have together exerted strong upward pressure on energy prices. There is also speculation.

As a short-term means of avoiding serious energy supply interruptions, strengthened stockpiles of oil or regional joint stockpiles in the Asian region are being deliberated. For the medium- and long-term countermeasures, an international transmission linkage in the ASEAN region or international pipeline networks of oil and gas are on the agenda. Every Asian country has a strong need to secure all possible energy options for their energy security; not limited to oil, coal, natural gas, hydro-power, but including nuclear power and renewable energies. For further diversification with more possible options in the future, research on methane-hydrate, hydrogen or nuclear fusion is also of crucial necessity as well as the international cooperation in the relevant fields. Due consideration should be also made to preserve global environment.

The Future of Asia in Rapid Economic Growth: Increasing Energy Demand and Nuclear Power Generation

Takahiko Ito
Executive Vice President
Chubu Electric Power Co., Inc.

In Japan, nuclear power industry has accumulated its abundant experiences while providing approximately 30% of Japanese electricity consumption, and having operated 53 units.

On the other hand, with economic stagnation and slump in electricity demand, we are leaving the age of power station construction and moving into the age of maintenance. In addition, environment of nuclear power operators have dramatically changed within a couple of years such as progress of electricity market deregulation and changing the system of inspection by the regulator.

Together with environmental change mentioned above, nuclear operators' need to invest much human resource into their challenging such as countermeasure for current aging plants, Condition Basis Monitoring for achieving superior performance, and introducing new maintenance approach based on risk information

Domestic power plant providers can show their technical ability through engineering support of maintenance area mentioned above; however, I think that it is not enough to maintain technological capacity of designing and construction skills only through implementing currently planned domestic projects. Therefore, expanding plant providers' business into overseas will contribute both preventing from de-industrialization of our nuclear technology and activating our industry. Moreover, by leveraging our plentiful experiences regarding nuclear power plant operation, our industry can contribute to ensure safety of worldwide nuclear power operation. With this regard, I believe that globalization of our industry has significances.

Here, I would like to put following comments on the globalization as a nuclear power operator.

- Our industry needs to make continuous effort to enhance our plant performance. As a result of accumulating good performance, our industry would be highly evaluated from foreign countries.
- Regarding the globalization, it is necessary to take measures corresponding with each counterpart country's affairs. Therefore, the government and the industry carry out each appropriate role while considering the past circumstances. For example, preparation of foundation such as human resource development and law system are essentials for countries without commercial nuclear power plant. I believe role of the government is critical regarding these areas. The other side, the industry should contribute to improve counterpart's technical skills through international cooperation programs with practicable basis as we have done ever.

For prosperity of our industry, not only individual efforts but also collective efforts among worldwide nuclear power operators to decrease risk and enhance safety of operation are critical. Regarding the issue, WANO Tokyo Centre will lead to improve safety performance in Asian Countries.

Suk-joo Jhun
General Manager of Project Department, Project Division,
Korea Hydro-Nuclear Power Co., Ltd., Korea

Based on the diversification policy of energy resource and ensuring the reliable supply of energy source, nuclear power has grown to become a key energy source capable of meeting the increasing energy demand in order to sustain its economic development in Korea.

Korea Hydro & Nuclear Company, KHNP, now has 20 operating units including Ulchin 5 & 6 which went into commercial operation respectively last year and this month. As of the end of 2004, the installed nuclear power capacity represents 27.9% of the country's total installed capacity and nuclear power generation accounts for 38.3% of the total nationwide generation. The performance of Korean nuclear power plants has shown remarkable improvement when compared to previous years. The annual average capacity factor for 19 units in 2004 was 91.4%. In proportion to the accumulation of operating experience, the number of unplanned trips has steadily dropped. In 2004, there was a total 12 unplanned trips averaging 0.6 occurrences per unit.

According to the government's long-term power development plan, eight new nuclear power units will be constructed by 2017, including the six units that are currently under construction or planning. During this time period, four APR1400 units will be constructed. APR1400 which stand for "Advanced Power Reactor 1400" was launched in 1992 to develop an evolutionary advanced Light Water Reactor(LWR), enhanced in terms of safety and economics. The APR1400 incorporates design features for increased safety, capacity up-rating and advanced construction technology to improve the economics.

Based on domestic technology and experience in the construction and operation of nuclear power plants, the Korea nuclear industry has matured to become a strategic export business. Moreover, it has successfully achieved technology self-reliance by developing the OPR1000 and has improved its technology by developing the APR1400. Based on this experience and technology, and the company's high rating within an international standard, KHNP intend to contribute to the peaceful development of nuclear power energy and enhance cooperation with the countries in the Asia region.

Developing Asia
–Increasing Energy Demand and Expansion of Nuclear Power-

Sueo Machi
Commissioner, Atomic Energy Commission of Japan

1. Cooperation in East Asia

"Energy and Environment" is an important issue of cooperation in East Asia where the rate of economic growth is the highest while energy resource is most limited in the world. Japan should take leadership in the cooperation since it has advanced technologies of nuclear power, energy saving and renewable energy.

2. Expanding nuclear power in Asia

In Asian region, number of nuclear power plant (NPP) is increasing at the highest rate to meet expanding demand of energy. In China 27 additional NPPs will be in operation before 2020 to have the share of only 4% total power capacity. In Japan three more NPPs are under construction to be in operation in Japan by 2010 and additional 6 NPPs are planned to be completed by 2030. In India even 500MWe FBR plants will start operation to pursue its ambitious nuclear program. Operation factor of NPPs in Korea exceeds 90% higher than that of Japan by 10 points. Nuclear power deserves to be considered as an important option in the future energy planning in terms of energy security and global warming.

3. Global Warming to Energy Derived CO2

Prof. Lovelock well known environmentalist for his "Gaia Theory" recently published a paper entitled with "Nuclear power is the only green solution" to prevent the global warming. China emits 15% of world CO2 due to burning large amount of coal (70% of primary energy). Nuclear produces power without emitting CO2. However, the CDM (Clean Development Mechanism) of Kyoto Protocol does not include nuclear power. This contradicts with the vision of the Kyoto Protocol.

4. Human Resource Development

For rapid and sound development of nuclear power in developing countries, enough number of well educated and trained workforce such as engineers, operators and safety experts are highly needed. Government of Japan has been providing training workshops and the scientist exchange program for Asian countries for almost 20 years. In this context, Government of Viet Nam has proposed to set up Asian Nuclear University by networking of existing nuclear institutes and universities in the framework of FNCA.

Japanese Nuclear Technology and International Contributions

Masao Niwano
Chairman, Nuclear Energy Steering Committee,
Japan Electric Manufacturers' Association
Executive Officer Corporate Senior Vice President, Toshiba Corporation

World Leading Nuclear Technology

The history of Japanese Nuclear technology development begins with the absorption of foreign reactor technologies introduced in the 1960s. Once the technology base was strong enough for Japanese companies in the industry to build nuclear power plants, we initiated "An Improvement and Standardization program," a collaboration between the public and private sectors. This had three phases. In the first and second of these, we developed our own technologies for BWR and PWR and achieved improved levels of operational performance. Advanced included higher reliability and maintainability, lower exposure to radiation for site crews and increased capacity. In the third phase, we initiated pioneering work to develop and demonstrate new advanced designs of light water reactors, the ABWR and APWR.

The ABWR was the first advanced design to be achieved, and units have already been successfully constructed and commissioned. Thanks to an advanced plant concept integrated into proven and innovative individual technology elements, the ABWR has demonstrated excellent levels of safety, reliability and plant performance, and a good economic performance. Japanese nuclear power plant manufacturers now have a track record of reduced-schedule, on-time construction of nuclear power plants incorporating complicated, highly integrated systems that require extensive quality control structures and advanced construction management skills. Today, Japanese nuclear power plant manufacturers are recognized as the world leaders, with the capability to provide nuclear power plants on a turnkey basis.

Future international contributions of Japanese nuclear industries

(1) Enhancement of international competitiveness

In order to enhance their competitiveness in the world market, Japanese nuclear plant manufacturers must comply with global standards, provide technologies and products that meet the needs of customers, implement aggressive global procurement, form strategic partnerships with foreign companies, and improve on their ability to provide integrated construction services abroad. In fact more global standard features must be incorporated into the designs of Japanese Advanced Light Water Reactors, the only

proven advanced types in the world. In addition, our advanced designs must also be improved in terms of their reliability and economy.

To meet the diverse needs of different countries and customers, Japanese nuclear power plant manufacturers must develop innovative product lines, such as small and medium sized reactors that will allow us to respond to the different power demand profiles of potential customers and to provide distributed power generation sources for areas with less advanced power grids. We anticipate extensive government support for developmental work on revolutionary designs, particularly in the area of system verification testing.

(2) More Government Support for the Nuclear Plant Export Business

Recently, European and American nuclear power plant manufacturers have won support from their governments and accelerated integrated sales promotion activities. In global competition, it is critical and sometimes make significant disparity by having or not government supports or that the legal systems of exporting countries are in line with those of importing countries. It is very important to lay the groundwork for supportive and cooperative work in advance with countries such as the Asian nations that expect to introduce and construct nuclear power plants in the near future, from the very initial stage to the establishment of key policies principles, such as non-proliferation and peaceful nuclear use.

Possibility of Nuclear Power Introduction into Developing Country

Tran Chi Thanh
Senior Researcher, Nuclear and Thermal Power Department
Institute of Energy, EVN, Vietnam

Developing countries have a rapid increasing in power generation. With the restriction in fuel supply for power generation, satisfying electricity demand in the near future becomes a big problem. Then as experience of countries with developed nuclear industry, introduction of NPP into power resources may become favorable alternative for developing countries. However nuclear technology is a high technology especially it relates to safety, introduction of nuclear power plants requires many conditions which are not satisfied in the developing countries, so development of nuclear power still remains challenges and difficulties for them.

Infrastructure: Developing countries have weak infrastructures. There are many related questions to be answered before developing nuclear power program:

- How to establish regulation base and laws for nuclear power when law system is not developed?
- How to promote industrial sectors to the level enough for nuclear power technology transfer?
- How to develop human resources and promote science and technology?
- Is the economy structure suitable for the nuclear power introduction?
- What will be impact of traditional culture on safety culture?

Nuclear safety: With the current technology, is nuclear power plant absolutely safe? Can we provide that "Chernobyl" will not occur again? How will be safety concept with practical conditions of each country? How can scientists, technicians, managers promise to Government about safety of nuclear power plants?

Impact on economy and risk: Risk of investment and accident risk always exist when we develop nuclear power plants. How this risk will impact on economy? Most of developing countries have low GDP (Vietnam: 35-40 billions USD). Each nuclear power plant (2 units) costs 4 billions USD. Investment risk is big (example of the Philippines). In the case of accident the risk will be higher, because we have to spend more to accident liquidation and elimination of consequence. Is the ratio of investment/GDP (4/40) big? If accident occurs then would the accident break down economy?

Financial arrangement: Developing countries are lack of finance for NPP projects? How does the financial arrangement impact on international cooperation? Will it become a burden for the next generation?

Role of nuclear power in the future: Developing countries have to determine whether they need nuclear power or not. If YES then when NPP will start operation? How about renewable energy (RE)? Specialists evaluate that in the future RE will develop and it will replace nuclear power. Is it true and why? If we afforest and use wood to generate electricity then this project seems very good and like sustainable development. This project will need less money than nuclear. We willl save money for other purposes. How we can oppose this idea?

Proliferation: Proliferation becomes a big problem and development of nuclear power becomes a

sensitive question for the countries who want to introduce nuclear power. We have examples of Iraqi, North Korea and Iran now. Will we face this problem when we introduce nuclear power? In fact who have cooperation with Russia (or China) in nuclear power will face this problem. Is it true?
Security and defense ability: Security is very important when terrorism becomes world problem. How we can organize a safe security system? How nuclear power development can affect on defense ability?
Without resolving these challenges and difficulties developing countries can not introduce nuclear power into their countries.

China's Nuclear Power Generation

Xin Feng
China National Nuclear Corporation, China

China is the biggest developing country with one-fifth of the world's population. Over the last two decade there has been a high speed increase of economic, with a much more urgently demand for energy produce. In 2004, the total electricity generation has reached 2,187 TWe, It grew by 14.8% than that in 2003, In spite of such a high growth, the electricity generation still can not meet the requirement of national economic growth. Nowadays, the China government has changed the nuclear power development policy form "developing moderately" to "developing actively", and a ambiguous plan is now making. As a safe and clean power resource, nuclear power will play a very important role in the near future in China.

The Role of Nuclear Power in Japanese Energy Policy

Tadao Yanase
Director, Nuclear Energy Policy Planning Division
Agency for Natural Resources and Energy
Ministry of Economy, Trade and Industry, Japan

1. Role of nuclear power in energy policy

Unlike fossil fuels (oil, natural gas, etc.) , nuclear power is an energy source free from localized distribution or quantitative limitations for exploitation. This is a big advantage for energy security. Uranium resources are not unevenly distributed to any great extent, and furthermore, the nuclear fuel cycle using fast breeder reactor technologies will enhance the value of nuclear energy to make it an almost unlimited source of energy.

Nuclear power also has the major advantage of not discharging CO_2 in the process of electrical generation. Other renewable energies like solar or wind power are also beneficial in limiting CO_2 emission, but they have drawbacks of supply instability and low economic competitiveness.

In considering stable energy supply as well as global environmental issues, the direction for future energy policy is not "either nuclear OR renewable", but "both nuclear AND renewable." It is reasonable to assume that electrical generation via nuclear power will play a similar, if not greater role than it does at present (30-40% of electric power generation).

2. Projection of nuclear power in the medium and long terms

Maximum use should be made of existing plants with the "Safety First" principle. They will start to be replaced with new ones from around 2030 onward. Commercial introduction of fast breeder reactors will be targeted for around 2050. The major line of nuclear power plants until then will be upgraded (improved) large-size LWRs. Standardized medium-sized LWRs may also be an option.

3. Nuclear power policy issues

Two fundamental viewpoints shared by the Government and electric utilities in the energy policy field are: (1) Maximum use of existing NPPs, and (2) Locating new NPP sites by means of ensuring nuclear safety and public understanding of nuclear power needs.

Deregulation in the electricity market, however, is weakening utilities' incentives to use nuclear power which needs longer and larger investments. Construction of new NPPs in Japan may continue to stagnate. On the other hand, demand for a significant number of

reconstruction projects is also expected as early as 2030. In this context, a serious issue for energy policy is the question of how the Japanese nuclear power industries can maintain sufficient robustness in the fields of technology, safety, and personnel in the twenty-five years or more before the next wave of construction begins.

The Government has instituted various subsidy mechanisms for the nuclear industry and radioactive waste final disposal mechanisms including the so-called preferential treatment system for electric power utilities to deal with electricity liberalization.

The Japanese Government now has a clear-cut stance towards facilitating nuclear exports. In an official letter to the Chinese government in February 2005, the Minister of Economy, Trade and Industry expressed the Japanese Government's support for the scheduled new NPP constructions in China. The Japan Bank for International Cooperation (JBIC) and Nippon Export and Investment Insurance (NEXI) also conveyed to China their willingness to specify conditions for export credit grants in response to the Government's commitment.

The following areas will be continually reviewed: safety assurance, obtaining public understanding, creating a shared vision for the future through close communication among those working in nuclear power development, placing priority on technological development strategic projects and the electricity networking mechanism under energy market deregulation.

[MEMO]

Wednesday, April 20

Session 3

"Scenario for Realizing the Nuclear Fuel Cycle"

13:30-15:00

Chairperson

Hiroyuki Torii, Professor, Research Laboratory for Nuclear Reactors
Tokyo Institute of Technology, Japan

Japan's Long-Term Nuclear Program Council recently reaffirmed as national policy the effective use of plutonium and other resources through the reprocessing of spent nuclear fuel. At the Rokkasho reprocessing facility, which is at the heart of light-water reactor fuel recycling, uranium testing is being carried out toward operation in May 2007. At present, the government is fully engaged in developing a legal framework to support economic systems for smooth implementation of back-end businesses. While these major movements marking milestones toward establishing a fuel recycling system can be readily seen, there remain – when looking at the entirety of Japan's nuclear fuel cycle vision – many challenges to be met, including realization of the MOX-fuel-use program, construction of a spent fuel interim storage facility, and resumption of operation of the prototype fast reactor "Monju," with its key role in completing the fast reactor cycle.

This session will consider an action scenario for realizing the fuel cycle system, for which the nuclear industry should make concerted efforts in order to further ensure completion of the fuel cycle and smooth implementation of back-end business. In addition, we will have an opportunity of hearing views from a representative of Russia, who will introduce the current situation and future plan of its unique nuclear fuel cycle development, for any reference to the fuel cycle business in Japan.

Bearing Fruit in the Nuclear Fuel Cycle Business (tentative)

Yoshio Hirata

Vice President, Japan Nuclear Fuel Limited, Japan

Prospects for FBR MONJU and Advanced Fuel Recycle Development

Yuichi Tonozuka

President, Japan Nuclear Cycle Development Institute (JNC), Japan

The construction of the Fast Breeder Reactor "Monju" was launched in 1985 and it started power generation successfully in August, 1995 following the initial criticality attained in 1994. However, during a routine commissioning test at 40% electrical output, a leak of non-radioactive sodium coolant occurred from one of the three secondary sodium cooling loops in December1995. Its operation has been suspended since the sodium leakage accident.

The Government and the JNC (the PNC on the occasion of the accident) conducted an investigation to determine the cause, developed preventative measures and carried out whole check and review of the detailed design and construction procedures. Based on the result of this examination, the JNC made a plan of the Plant Modification Work. The government completed the safety licensing review in January, 2004.

While the JNC was making efforts to explain the necessity and safety of a fast breeder reactor to the general public of Fukui prefecture, the local governments finally agreed upon a start of modification work on Monju in February, 2005 as a prior understanding of the modification based on the Safety Agreements. It will take two years to complete the plant modification work, including preparatory work. Accordingly, the JNC is aiming to restart Monju in about three years, after the whole modification work is followed by a functional checkout.

The operation of Monju will demonstrate the reliability of the FBR technology applied to a power plant and the establishment of sodium handling technologies. In the next stage, Monju should be used to verify R&D results such as elemental technologies established by the Feasibility Study on a Commercialized FR Cycle System in association with R&D of fuel fabrication and reprocessing. In addition, Monju can play a significant rule for the demonstration of the burning of minor actinides.

Internationally, Monju is one of valuable plants in view of current progress on R&D of FBRs in the world. There are great expectations to cooperate with partners of foreign countries including Asia. The JNC will improve Monju and its related facilities as bases of international cooperation and promote the utilization of the accomplishments both nationally and internationally.

On the other hand, the JNC is going ahead with not only design studies and elemental

technology development in order to clarify feasible plant design concept, but also study of R&D processes of commercialization of the design concept in the Feasibility Study on a Commercialized FR Cycle System. The above outcomes of the study of R&D process will be achieved in fiscal 2005. The FBR Cycle Technical Systems will be unveiled around 2015. The systems will include commercial plant design, main data to support the design and concrete development plans for commercial use of a FBR plant.

In order to promote FBR cycle technologies, the JNC (a new entity starting from October) will employ Monju and its site facilities, Joyo and other test facilities in the O-arai Engineering Center and the nuclear fuel cycle facilities in the Tokai Works. Besides, the JNC will maintain the industry-government-academia R&D framework and take advantage of international cooperative projects such as Generation IV International Forum so that it can use R&D resources effectively and promote them efficiently.

The Current Situation and Perspectives in Russia of Research and Development of Fuel Recycling Systems with the Utilization of Fast Breeder Reactors (tentative)

Alexander. V. Bychkov
Director of Chemical Technology Division
Research Institute of Atomic Reactors (RIAR), Russia

[MEMO]

[MEMO]

Wednesday, April 20

Questions and Answers from the Citizens

15:20-17:00

Moderator

Naoko Ando, Goodwill Ladies of Niigata City (Port Queen Niigata)

Coordinator

Yoshiko Tsuchiya, Freelance Newscaster, Japan

By the time of this session, the 38th JAIF Annual Conference will have been underway for most of three days, addressing major issues facing nuclear power and society itself. Desiring not only to be "open to the public", but to help the public understand various nuclear issues in a meaningful context, there has been a special focus on the role of the Kashiwazaki-Kariwa area in nuclear development and use. In this session, the people will be able to ask questions and speak out about the presentations and discussions at the conference, which makes the session a meaningful opportunity in regard to Japan's nuclear development and use.

[MEMO]

[MEMO]

List of Members of the Preparatory Committee for the 38th JAIF Conference

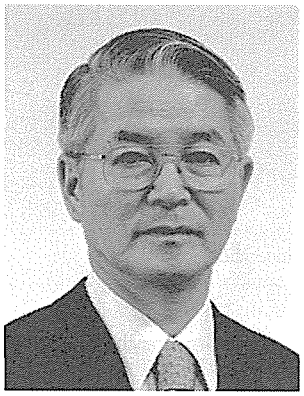
Short Biography of Chairpersons, Speakers and Panelists

Members of the Preparatory Committee for the 38th JAIF Conference

in alphabetical order

Chairman :	Akira Hasegawa	President, Niigata University
Members :	Hiroshi Aida	Mayor of Kashiwazaki City（12.6.2004-）
	Etsuko Akiba	President, ASCA Energy Forum
	Yohsaku Fuji	Chairman, The Federation of Electric Power Companies
	Tetsuo Hashimoto	Professor, Niigata University
	Iyoko Hosaka	Chairman, Women's Federation of Niigata Prefecture
	Keiji Kanda	Director, Japan Energy Policy Institute
	Tsunehisa Katsumata	President, The Tokyo Electric Power Co., Inc.
	Yo Kojima	President, Nagaoka University of Technology
	Keiichi Makuta	President, Tohoku Electric Power Co., Inc.
	Yasuo Matsumura	Chairman, The Kashiwazaki Chamber of Commerce and Industry
	Yoichi Morishita	Chairman, The Japan Electrical Manufacturers' Association
	Masazumi Saikawa	Mayor of Kashiwazaki City（-12.5.2004）
	Yoshikazu Sasaoka	President, The Federation of Electric Power Related Industry Worker's Unions of Japan
	Shoichi Seki	President, Association of Wealthy Niigata
	Hiroo Shinada	Mayor of Kariwa Village
	Yasutaka Takahashi	Chairman, Liaison Conference of Groups on Energy Problems in Niigata Prefecture
	Yorimoto Tanno	President, Niigata Institute of Technology
	Yuichi Tonozuka	President, Japan Nuclear Cycle Development Institute
	Hiroyuki Torii	Professor, Tokyo Institute of Technology
	Yoji Uchiyama	Professor, University of Tsukuba
	Akira Uehara	Chairman, The Federation of Chamber of Commerce and Industry in Niigata Prefecture
	Ayako Yoshida	President, Women's Federation of Niigata City
Observers :	Masaki Ishikawa	Principal Deputy Director, International Nuclear Energy Cooperation Division, Ministry of Foreign Affairs
	Kazuhiro Kusumi	Director General, Department of Industry and Labor, Niigata Prefectural Government
	Kazuo Todani	Director for Atomic Energy, Directorate General for Science and Technology Policy, Cabinet Office
	Itaru Watanabe	Director of Atomic Energy Division, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology
	Tadao Yanase	Director, Nuclear Energy Policy、Planning Division, Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry

OPENING SESSION (KASHIWAZAKI)



Tsunehisa Katsumata

Date of Birth : March 29, 1940

Education :
1963 Graduated from Department of Economics, Tokyo University

Present Position :
President ,
The Tokyo Electric Power Co., Inc.

Career :
1963 Joined Tokyo Electric Power Company
1983 Manager, Research Section, Corporate Planning Department
1985 Manager, Corporate Planning Section, Corporate Planning Department
1988 General Manager, Takashima-dori Sales Office, Kanagawa Branch
1991 Deputy General Manager, Corporate Planning Department
1993 General Manager, Corporate Planning Department
1996 Director (in charge of Corporate Planning, General Affairs etc.)
1998 Managing Director (mainly responsible for Corporate Planning and International Affairs)
1999 Executive Vice-President
2001 Executive Vice-President Executive General Manager, Business Development Division
2002 President

Jun-ichi Nishizawa

Date of Birth : September 12, 1926,
Professiona :
1962~1990 Professor, Research Institute of Electrical Communication, Tohoku University
1968~2004 Director, Semiconductor Research Institute, Semiconductor Research Foundation
1989~1990 Director, Research Institute of Electrical Communication, Tohoku University
1990(Apr.)~ Emeritus Professor, Tohoku University
1997~present Director, Tohoku Independent Comprehensive Training Center
1997~present Honorary President, Miyagi University
1998~present President, Iwate Prefectural University
2000~present Chairman, Japan Atomic Industrial Forum, Inc.
2002~present President, The Engineering Academy of Japan, Inc.
2004~present Emeritus Director, Semiconductor Research Institute, Semiconductor Research Foundation
2005~present President, Tokyo Metropolitan University
Award and Conferment :
1974 Japan Academy Prize
1983 Person of Cultural Merits (Bunka-Korosha) conferred from Japanese Government
2000 IEEE Edison Medal (IEEE, U.S.A.)
2002 The First Order of Merit conferred from Japanese Emperor
2002 IEEE Jun-ichi Nishizawa Medal was decided (IEEE, U.S.A.)
Academic Activity and Honorary Membership :
1995 Member of the Japan Academy
2002 Foreign Member of the Yugoslav Academy of Engineering and others

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Toshio Kojima

Date Of Birth : November 11, 1939

Place Of Birth
Kumagaya City, Saitama Prefecture, Japan

Educational Background :
Mar. 1963 Graduated From Chuo University (Department Of Political Science, Faculty Of Law)

Professional Career :
May. 1971 Member, Kumagaya City Assembly
July. 1980 Chairperson, Kumagaya City Assembly
Apr. 1983 Member, Saitama Prefectural Assembly
Mar. 1996 Chairperson, Saitama Prefectural Assembly
Jan. 1999 Elected as a member of the House of Representatives (H.R.) for the first time
June. 2000 Re-elected as a member of the H.R. (2nd term)
May. 2001 Parliamentary Secretary for Foreign Affairs (until Jan. 2002)
Oct. 2002 Parliamentary Secretary for Defense (until Sep. 2003)
Sept. 2003 Deputy Secretary-General, Liberal Democratic Party (LDP)
Sept. 2003 Chairperson, Subcommittee on Defense Policy, National Defense Division, LDP
Nov. 2003 Re-elected as a member of the H.R. (3rd term)
Sept. 2004- Senior Vice Minister of Education, Culture, Sports, Science and Technology

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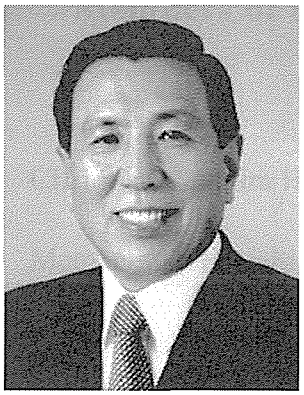


Sanzo Hosaka

Date of Birth : May 15, 1939

Place of Birth : Tokyo

Education :
1962 Graduated from Rikkyo University, Law Department

Career :
1962 Entered Tokyo Nissan Auto Sales Co., Ltd.
1971 Elected to the Taito City Council
1973 Elected to the Tokyo Metropolitan Assembly
1987 Chairman of Taito District, Federation of Tokyo Metropolitan Liberal Democratic Party Branches (presently incumbent)
1995 Elected to the House of Councillors (HC) (from Tokyo electoral district)
1998 Parliamentary Vice Minister of International Trade and Industry
Senior Acting Secretary-General, Federation of Tokyo Metropolitan Liberal Democratic Party Branches
2001 Elected to the HC (second time)
Chairman, Committee on Economy and Industry, HC
Secretary-General, Federation of Tokyo Metropolitan Liberal Democratic Party Branches (presently incumbent)
2002 Senior Director, Committee on Budget, HC
2003 Chief Deputy Secretary-General for the LDP in the HC
2004 Senior Vice Minister of Economy, Trade and Industry

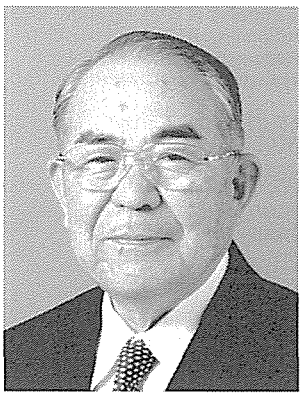
Hiroshi Aida

Date of Birth : March 28, 1947

Education :
1971. 6 Tokyo University, Department of Technology

Experience :
1971. 7 Joined Osaka City Hall
1977. 4 Joined Nagaoka City Hall
2002. 7 Fellow, Economic Research Institute for Northeast Asia (ERINA)
2004. 12 Mayor of Kashiwazaki City

SPECIAL PRESENTATIONS (KASHIWAZAKI)



Tsutomu Kanai

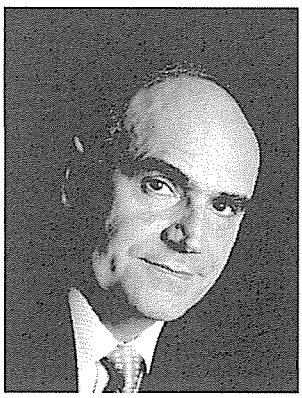
Dr. Tsutomu Kanai is Chairman of the Board and Director of Hitachi, Ltd. He was named to the current position in June 2003 when Hitachi, Ltd. newly adopted the Committee System of Management .

He joined Hitachi in 1958 and served in the Central Research Laboratory, developing nuclear reactors. From 1961 to 1962, he was engaged in research in nuclear physics at the Argonne National Laboratory in Illinois, U.S.A.

In 1985, Dr. Kanai was elected Executive Managing Director and Group Executive of the Power Group. He assumed the position of Senior Executive Managing Director in 1987 and the positions of Executive Vice President and Director in 1989. During his vice-presidency, he was responsible for the power and the industrial systems business. At that time, he also headed a corporate strategic committee for Hitachi's global operations. He was elected President and Representative Director in 1991. And he was named to Chairman of the Board and Director in Hitachi's former management system in 1999.

He is a board member of various organizations outside of the company.
He chairs the Japan Machinery Federation, the Japan Accreditation Board for Conformity Assessment, the Nanotechnology Business Creation Initiative, the Japan Atomic Industrial Forum as a vice chairman and others.

Dr. Kanai received his B.S., M.S. and Ph. D. in Mechanical Engineering from the University of Tokyo. He is also qualified as a Registered Nuclear Chief Engineer (Japan) and a Professional Engineer in Nuclear Engineering (USA).



Alain J. Bugat

Date of Birth : September 8, 1948

Education :
Graduated from the French "Ecole Polytechnique" and from the "Ecole Nationale Supérieure des Techniques Avancées".

Professional Career :

January 2003~present	Chairman at French Energy Atomic Commission (CEA)
1999~2003	Chairman & C.E.O. at TECHNICATOME
1992~May 1999	Director of the Advanced Technologies Division - CEA
1989~1992	Director for Defence Program, then, Deputy General Manager then, General Manager at CISI INGENIERIE : European Software company
1984~1989	Deputy Director of the Nuclear Test Division - CEA*
1982~1984	Assistant to the General Director of Industry (Ministry of Industry) Chief of "Observatory of Industrial Strategies"
1980~1982	Deputy Manager - Experiments and Measurements Unit
1972~1980	Research Engineer, then Group Manager CEA/Limeil - Theoretical studies and design: Hydrodynamics - Photonics - Neutronics - Computing.

Yosaku Fuji

Date of Birth : September 14, 1937

Education :

March 1960	Graduated from the Faculty of Engineering, Kyoto University

Professional Career :

April	1960	Joined The Kansai Electric Power Co., Inc.
Dec.	1977	Manager, Corporate Planning Department
June	1978	Power Engineer, South Asia Projects Department, The World Bank
June	1987	General Manager, Corporate Planning and TQC Office
June	1989	Senior General Manager
June	1993	Member of The Board of Director
June	1997	Senior Managing Director
June	1999	Executive Vice President and Director
June	2001	President and Director
Sept.	2002	Chairman. The Federation of Electric Power Companies

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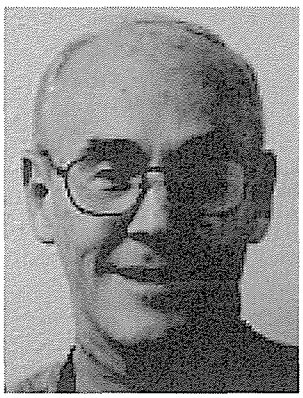


Michael T. Coyle

Mr. Coyle joined the Washington, DC based Nuclear Energy Institute (NEI) in December of 2004. He is on loan to NEI from the Nuclear Management Company (NMC) for an 18-month assignment. As Vice-President of Operations he is responsible for providing leadership and oversight of generic engineering and operational issues. His duties involve significant interaction with the U.S. Nuclear Regulatory Commission (USNRC).

He joined NMC in 2001 after a distinguished career in the U.S. Navy and a prior leadership role in the commercial nuclear industry. He initially served at NMC's Monticello Nuclear Generating Plant in Minnesota before moving on in September 2001 to the Cooper Nuclear Station in Brownville, Nebraska. He provided management services to the Nebraska Public Power District (NPPD) under a contract between NMC and NPPD, and in March 2002 was named Cooper Site Vice President. At the conclusion of this assignment, he was awarded the first ever Commendation for Superior Performance by the NPPD Board of Directors.

Mr. Coyle graduated with distinction from the U.S. Naval Academy in 1965. In 1976 he received a Master of Science degree in mechanical engineering from the Naval Postgraduate School in Monterey, Calif. After retiring from the Navy with the rank of Rear Admiral, Coyle joined PECO Energy where he served in the nuclear division at Peach Bottom and Limerick. In 1999 he became site vice president at Clinton Power Station in Clinton, Ill.

PLENARY SESSION PART 1

Yo Kojima

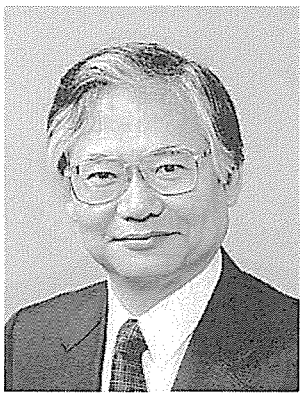
Year of Birth : 1942

Education :

1966	Graduated from Faculty of Science and Engineering, Tokyo Institute of Technology

Professional Career :

1966~	Research Associate, Tokyo Institute of Technology
1980~	Associate Professor, Nagaoka University of Technology
1987~	Professor, Nagaoka University of Technology
1995~1996	Head of Language Center, Nagaoka University of Technology
1996~2001	Head of Central Machine Shop, Nagaoka University of Technology
2001~2003	Director of University Library, Nagaoka University of Technology
2001~2003	Vice President, Nagaoka University of Technology
2002~2003	Head of Techno-Incubation Center, Nagaoka University of Technology
2003~	President, Nagaoka University of Technology
2004~	President, National University Corporation Nagaoka University of Technology



Shunsuke Kondo

Date of Birth : July 26, 1942

Education :

1961~1965	Faculty of Engineering, The University of Tokyo Awarded the degree of BE in Nuclear Engineering
1965~1967	Faulty of Engineering, The University of Tokyo Awarded the degree of ME in Nuclear Engineering
1967~1970	Faculty of Engineering, The University of Tokyo Awarded the degree of DE in Nuclear Engineering

Occupational Career :

1970	Lecturer, Department of Nuclear Engineering The University of Tokyo
1971	Associate Professor, Department of Nuclear Engineering The University of Tokyo
1984	Professor, Nuclear Engineering Research Laboratory The University of Tokyo
1988	Professor, Department of Nuclear Engineering The University of Tokyo
1993~	Professor, Department of Quantum Engineering and Systems Science, The University of Tokyo (Change of Department's name)
1999	Director, Research Center for Nuclear Science and Technology The University of Tokyo
2004. 1	Chairman, Atomic Energy Commission of Japan

Hiroo Shinada

Born in 1957

1991	Member, Kariwa Village Assembly
1993	President, Kashiwazaki Junior Chamber, Inc.
1999	Speaker, Kariwa Village Assembly
2000~	Mayor of Kariwa Village (In his second term since 2004)

Takao Komachi

Date of Birth : December 7, 1951

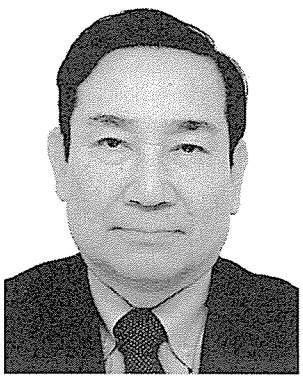
Education :

Mar.,1970	Graduated Kashiwazaki Senior High School
Mar.,1975	WasedaUniversity, Dept. of Political Economic Science

Experience :

Apr., 1975	Joined Niigata Nippo, Press Bureau, Member of Editorial Board etc
Apr., 2000	Kashiwazaki Bureau Chief and Member of Editorial Board, Niigata Nippo
Apr., 2003	Editorialist and Member of Editorial Board, Niigata Nippo

Apr., 1998~Mar.,2004
Adjunct Professor in International Relations, Faculty of Law, Niigata University



Norio Tamura

Date of Birth : March, 1944

Education :

1967	Department of Science and Physics, Kyoto University
1969	Master's Degree in Science and Physics, Kyoto University
1972	Doctor's Degree in Science and Physics, Kyoto University Left university at the expiration of the term
1978	Doctorate of Science, Kyoto University

Experience :

1972	Teaching Fellow, Department of Science, Kyoto University
1978~80	Guest Researcher, Argonne National Laboratory in U.S.A
1989	Associate Professor, Department of Science, Okayama University
1996	Professor, Graduate School of Natural Science Research Studies, Niigata University (Specialty of Energy Basic Science)

PLENARY SESSION PART 2

Etsuko Akiba

Education :
1971 Graduated from School of Commerce, Waseda University

Professional Career :
1971~1973 Public Relations Office, Japan Airlines
1989 Qualified as Advisory Specialist for Consumer Affairs (ASCA) accredited by the Minister of International Trade and Industry (MITI)
1989 Public Relations Department, The Federation of Electric Power Companies of Japan (part-time consultant)
1996~1999 Public Relations Office, NTT East (part-time consultant)

Present Posts :
President, ASCA Energy Forum (NPO) / Director and General Manager of Branch of East Japan, Nippon Association of Consumer Specialists / Director, Green Consumer Tokyo-net (NPO) / Advisory Staff, Public Relations Department, The Federation of Electric Power Companies of Japan, etc

Committee Members for :
Committee on Consumers' Life of the Japanese Industrial Standards Committee / Proper Information Disclosure Committee, Nuclear Management Organization of Japan / Assessment Committee on Sister/Friendship City Affiliation Projects, Japan Industrial Location Center, etc

Yoshiko Arano

Date of Birth : January 15, 1951

Education :
1971 Showa Women's University Junior College

Experience :
1971 Head Office, Tokyo Gas Co., Ltd.
1977 Joined Aranoya
1987 Appointed as a Director, Aranoya

Social Activities :
1994 Member, Effective Utilization of Energy Exploratory Committee
1995 Member of Research Group, Symbiosis of Electric Power Plant Overseas
Vice President, Citizens' Alliance for Promotion of Kashiwazaki Women Plan
2000~ Commissioner, Kashiwazaki Tourism and Recreation Promotion Public Corporation
2002~ Member of Kashiwazaki Environment Council
2003~ Commissioner, Council for Kashiwazaki International Relations / Commissioner, Taiyo Social Welfare Corporation / Member of Governing Board, Ensuring Transparency of Kashiwazaki-Kariwa Nuclear Power Plant
2004~ Appointed as a Chairperson
2005~ Council for Environment and Network in Kashiwazaki (Countermeasures Against Global Warming)

Organizational Affiliation :
Japan Dietetic Association / Citizens' Alliance for Promotion of Kashiwazaki Gender Equality Plan / Japan Productivity Center for Socio-Economic Development "Forum Energy Think Together"

Katsuko Utashiro

Date of Birth : 1943

Currently serving as :
Chairperson, "Hakutoh-no-wa (a citizen's group)"
Instructor, Energy-saving campaign
Member, Kashiwazaki Consumers Association
Councilor, Kashiwazaki Nuclear Power Public Relations Center
Director, Environment School Civic Activities
Committee Member,. Town management ordinance for crime-free and confident community building in Niigata Pref
Steering Committee Member, Niigata Gender-equality Foundation

Hiroshi Kawaguchi

Born in 1959

Education :
Studied at the Agriculture and Technology School of Nihon University

Professional Career :

1980	Joined Kawaguchi Farming Company.
1986	Joined Kashiwazaki Junior Chamber
1987	Joined the Group for Promoting Nuclear Power Plant Construction and Regional Development (presently Kashiwazaki Energy Forum) in Kashiwazaki
1995	Became the President of Kashiwazaki Junior Chamber
2001	Became Farming Specialist Accredited by the Niigata Prefecture
2002	Became the Chairman of the Kashiwazaki Energy Forum
2004	Became member of Kashiwazaki Chamber of Commerce and Industry Joined the Chamber's Committee for Nuclear Power

Seiichi Taneoka

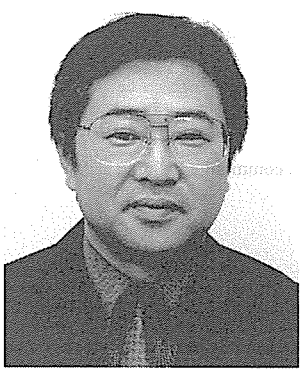
Date of Birth : January 14, 1955

Education :

Mar.,1973	Graduated Niigata Prefectural Kashiwazaki Technical High School

Experience :

Apr., 1973	Joined Tokyo Electric Power Co., Inc.
Apr., 1973	Worked in the company's Fukushima Nuclear Power Station
Feb., 1981	Worked in the company's Niigata Nuclear Construction
Sep., 1985	Worked in the company's Kashiwazaki Kariwa Nuclear Power Station
Jul., 1986	Executive, Kashiwazaki Kawiwa Nuclear Energy Division, TEPCO Union
Jun., 1997	Chief, Dept. of Management Measure, TEPCO Union
Jul., 1999	Director General, The Federation of KANTO Electric Power Related Industry Workers' Unions of Japan
Jun., 2002	General Secretary, TEPCO Union
Jun., 2003	Deputy Executive, TEPCO Union



Minoru Fuse

Date of Birth : February 5, 1952

Education :
Graduated Chuo-University, correspondence division of faculty of law

Present :
Director of Nuclear Safty Kashiwazaki City office

OPENING SESSION (NIIGATA)

Keiichi Makuta

Representative Director & President
Tohoku Electric Power Co., Inc.

Date of Birth : September 11, 1935

Education :
Mar.,1958 Graduated from Fukushima University, Faculty of Economics

Career :
Jun., 2001 Representative Director & President, Tohoku Electric Power Co., Inc.
Jun., 1997 Representative Director & Executive Vice President
Jun., 1991 Representative Managing Director
Jun., 1989 Senior Officer & General Manager, Tokyo Branch Office
Jun., 1987 Senior Officer & General Manager, Fuels Dept.
Jun., 1985 General Manager, Fuels Dept.
Jul., 1979 Deputy General Manager, Tokyo Branch Office
Feb., 1977 Manager, Fuels Dept.
Apr., 1958 Joined Tohoku Electric Power Co., Inc.

Hirohiko Izumida

Date of Birth : September 15, 1962

Education :
1987. 3 Bachelor of Law, Kyoto University

Career :
1987. 4 Joined the Ministry of International Trade and Industry (MITI)

After serving in following roles :
International Trade Administration Bureau / Small and Medium Enterprise Agency / Industrial Policy Bureau / Research Bureau, Economic Planning Agency / Visiting Scholar, University of British Columbia, CANADA / Deputy Director, Refinery Division, Agency for Natural Resources and Energy / Director, General Affair and Personnel Division, Industrial Structural Infrastructure Fund / Senior Research Fellow, Research Institute of International Trade and Industry / Senior Coordinator for Advanced Cargo Transport Systems Promotion, Ministry of Land, Infrastructure and Transport / Director-General, Governor's Office, Gifu Prefecture Government

2003. 11 Director-General, New Industry and Labor Bureau, Gifu Prefecture Government
2004. 10 Governor, Niigata Prefecture

Akira Hasegawa

Date of Birth : May, 1937.

Education :
March, 1960 graduated from Faculty of Science, Niigata University,
March, 1965 graduated from Graduate School of The University of Tokyo (Doctor of Science)

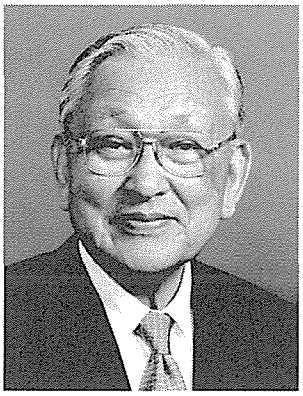
Experience :
Jan., 1980 Associate Professor, Niigata University
Oct., 1985 Professor in Faculty of Liberal Art, Niigata University
Apr., 1994 Professor in Faculty of Science, Niigata University
Feb.,2002 President, Niigata University

Specialized Field :
Theoretical Solid State Physics

Social Activities :
Director and member of Selection Committee, Uchida Foundation for the Promotion of Energy Science / Director and member of Selection Committee, Sasaki Foundation for the Promotion of Environmental Technology

Award :
1992 38th Nishina Memorial Award
1993 46th Niigata Nippo Culture Award

SPECIAL SESSIONS (NIIGATA)



Yumi Akimoto

Year of birth : 1929

Academic Career :

1951	B.S. in Chemistry from Tokyo Bunrika University (now Tsukuba University)
1954	Completed special research course at Tokyo Bunrika University
1957	Doctor's degree in Science at Tokyo Bunrika University
1958~1959	Studied at the Lawrence Radiation Laboratory at the University of California at Berkeley

Professional Career :

1954	Mitsubishi Metal Corporation (now the Mitsubishi Materials Corp.)
1976	General Manager, Nuclear Energy Department,. Mitsubishi Materials Corp.
1978	Director,. Mitsubishi Materials Corp.
1992	Executive Vice President,. Mitsubishi Materials Corp.
1994	President and CEO,. Mitsubishi Materials Corp.
2000	Chairman,. Mitsubishi Materials Corp.
2003	Director, Executive Advisor,. Mitsubishi Materials Corp.
2004	Chief Executive,. Mitsubishi Materials Corp.

Public Offices and Other Positions :

The Japan Atomic Industrial Forum, Inc. (JAIF), the Japan Atomic Energy Relations Organization (JAERO), the Central Research Institute of Electric Power Industry (CRIEPI), the Japan Institute of Office Automation, the Research Institute of Innovative Technology for the Earth (RITE) and the Union of Organization on Science and Technology, etc

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Ann S. Bisconti

Ann Stouffer Bisconti is President of Bisconti Research, Inc. (BRi). She is a nationally known expert on public opinion and communications research and has advised many companies and organizations on communications strategies. She is a frequent public speaker and author of five books and many other publications.

Dr. Bisconti was previously a vice president with Nuclear Energy Institute (NEI), where for 13 years she directed one of the most comprehensive research programs ever undertaken by an industry on challenging social issues. BRi continues to provide NEI's public opinion and communications research and serves many other clients.

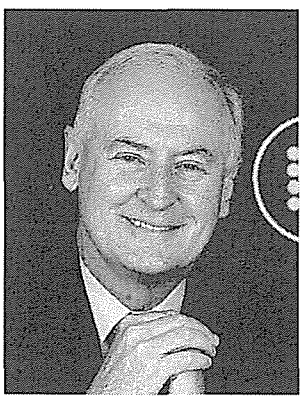
Prior to her tenure at NEI, Dr. Bisconti was best known for her studies on human resources. As Director of the Washington Office of Higher Education Research Institute, her Campus Image Studies helped client corporations gain a competitive edge in recruiting top students in engineering, computer sciences, and business.

As Associate Study Director of the W.K. Kellogg National Commission on Allied Health Education, she conducted research leading to recommendations for the educational and career preparation of allied health professionals contained in the book, The Future of Allied Health Education. She then led activities to implement these recommendations, as Director of the National Center for Allied Health Leadership.

Dr. Bisconti began her career as a study director with Marplan, the market research arm of Interpublic Group, whose advertising agencies include McCann-Erickson.

Dr. Bisconti is a member of the American Association of Public Opinion Research. In 2004, she was elected for a second term on the Board of Directors of the American Nuclear Society. She has provided consultation on risk communication projects to the American Medical Association, the Electric Power Research Institute, Organisation for Economic Co-operation and Development, and the U.S. Environmental Protection Agency.

Dr. Bisconti attended Radcliffe College/Harvard University, McGill University, and The Union Institute, from which she received her Ph.D. in Social Science Research in 1977. She is also listed in Who's Who in America in 2003.



Michael D. Parker

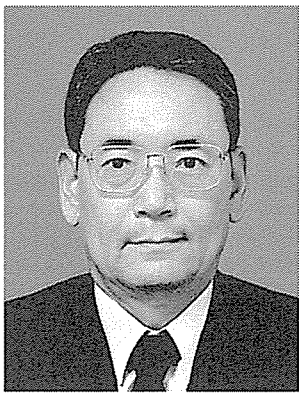
Mike Parker was born in Liverpool and educated in the North West of England, receiving a Bachelor's degree in Chemical Engineering from the University of Manchester and an MBA from the Manchester Business School.

He began his career with Dow in 1968, serving in a wide variety of jobs in research, manufacturing and the commercial area. His first job for Dow was in research and development. He moved on to become a production engineer followed by appointments in a series of commercial and business leadership roles. International experience has seen him working in the USA, UK, Switzerland and Hong Kong.

He was President and Chief Executive Officer of The Dow Chemical Company in Midland, Michigan, USA from November 2000 to December 2002 and a member of the company's Board of Directors since 1995.

He has also been a board member of the American Plastics Council, the American Chemistry Council, the Dow Corning Corporation and the National Legal Centre for Public Interest in America.

He was appointed as Group Chief Executive of BNFL on 1 August 2003.



Toshio Okazaki

Date of Birth : July 23, 1943

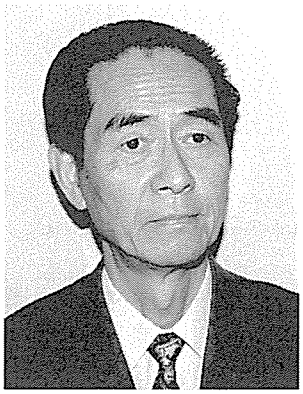
Present Position : President, Japan Atomic Energy Research Institute (JAERI)

Education : B.S. Nuclear Engineering, Osaka University (1966)

Professional Career :

1966. 4 To enter Science and Technology Agency (STA)
1977. 2 First Secretary, Embassy of Japan in France
1980. 3 Deputy Director, General Coordination Division, Minister's Secretariat, STA
1980. 4 Director, Office of Scientific and Technical Information, Institutes Administration Division, Promotion Bureau
1980. 7 Secretary to the Minister of State for Science and Technology
1983. 1 Director, Office of Emergency Planning and Environmental Radioactivity, Nuclear Safety Policy Division, Nuclear Safety Bureau
1983. 6 Director, Office of Nuclear Safety Policy Research, Nuclear Safety Policy Division, Nuclear Safety Bureau
1985. 6 Director, Reactor Regulation Division, Nuclear Safety Bureau
1987. 6 Director, Power Reactor Development Division, Atomic Energy Bureau
1989. 6 Director, Policy Division, Research and Development Bureau
1990. 6 Director, Finance Division, Minister's Secretariat
1992. 6 Deputy Director - General, Minister's Secretariat
1994. 7 Director-General, Atomic Energy Bureau
1997. 1 Deputy Minister for Science and Technology
1998. 6 Vice-Minister for Science and Technology
2000. 7 Vice President, Japan Atomic Energy Research Institute (JAERI)
2004. 1 President, JAERI

LUNCHEON



Kiichi Kato

Year of Birth : 1936

Career :
1959 Graduated calligraphy studies, department of education at Niigata University
1963 Trainee in department of philosophy at Kyoto University
1965 Served as assistant, lecturer and associated professor at Niigata University
1977 Professor at Niigata University
1984 Professor at post-graduate school, Niigata University
2001 Professor Emeritus at Niigata University
2002 Awarded Medal with Dark Blue Ribbon

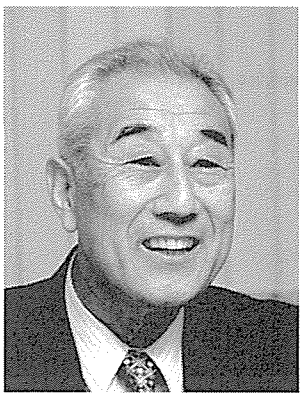
Publication :
"Ryokan's Writing/10 books in 5 volumes" / "Ryokan's Hokkesan" / "Ryokan - Minds of the Japanese people" / "Advise for Writing" / "Ryokan's Writing" / "Ryokan's Writing and Lifetime" / "Ryokan's Calligraphy english version" / "Book of Kiichi Kato's writing" / "Kiichi Kato's collected papers" / "Ugan-bonze's book of paintings" / "Introduction to Ryokan" / "The encyclopedia of Ryokan"

Present :
Vice President, National Ryokan Society,
Director of Ryokan Research Institute
Honorary President, Research Group at Beijing University
Counselor of Calligraphy advocates group
President, Institute of Education for calligraphy at Niigata University

SESSION 1

Haruki Madarame

Personal History :
1970 B. Eng., University of Tokyo
1972 M. Eng., University of Tokyo
1972 Researcher, Toshiba Research and Development Center
1975 Lecturer, University of Tokyo
1976 Associate Professor, University of Tokyo
1976 Dr. Eng., University of Tokyo
1990 Professor, University of Tokyo



Michio Ishikawa

Date of Birth : March 2, 1934

Education :
March.,1956 The University of Tokyo, Department of Technology, Mechanical Engineering

Experience :
May., 1974 Chief Scientist, Japan Atomic Energy Research Institute
Apr., 1983 Chief, Office of Safety Analysis, Japan Atomic Energy Research Institute
Apr., 1985 Chief, Japan Power Demonstration Reactor
Apr., 1989 Vice Manager, Tokai Research Laboratory
Apr., 1991 Professor, Department of Engineering, Hokkaido University
Apr., 1997 Engineering Advisor, Nuclear Power Engineering Corporation
Professor, Musashi Institute of Technology
Oct., 2003 Engineering Advisor, Japan Nuclear Energy Safety Organization

Hideaki Suzuki

Date of Birth : March 15, 1943

Title/Position : Managing Director
Plant Managing Department
Decommissioning Project Department
Projects Development Department

Education :
1966 Graduated from the Tokyo Institute of Technology
(B. Eng. Electrical Engineering)

Career :
1966 Entered the Japan Atomic Power Company
Shift Engineer of Tokai 1 (GCR)
1973 Deputy Manager of Tokai 2 Construction (BWR)
1978 Manager of Tsuruga 2 Engineering (PWR)
1987 Assistant General Manager of Simplified LWR Development (SBWR, SPWR)
1990 Deputy General Manager of ABWR & APWR Engineering
1993 General Manager of Tsuruga 3 & 4 Engineering (APWR)
1998 Director Deputy Executive General Manager of Projects Development Headquarters (T8uruga 3&4)
2001 ManagingDirector
Executive General Manager of Projects Development Headquarters
2003 Managing Director (Present Position)

Masamitsu Takashima

Date of Birth : November, 1964

Education :
Mar., 1988 Kobe University of Mercantile Marine, Department of Atomic Dynamics

Experience :
Apr., 1988 Joined Japan Atomic Power Company Co,. Ltd. (JAPC)
May., 1988 Assigned to Tokai No.2 Power Station, JAPC
Jun., 1994 Member of Executive Board, Japan Atomic Power Company Labor Union
Aug., 1996 General Manager of Tokai Branch, the Federation of Atomic Power Related Enterpris Labor
Aug., 1999 General Manager of Organization, the Federation of Atomic Power Related Enterpris Labor
Sep., 2001 Chief, Social and Industrial Policy Bureau, the Federation of Electric Power Related Industry Workers' Unions of Japan

Ichiro Takekuro

Date of Birth : March 13, 1946

Education :
1969 Graduated from Department of Mechanical Engineering, Faculty of Engineering, the University of Tokyo

Present Position :
Managing Director
Deputy Chief Nuclear Officer
Tokyo Electric Power Co., Inc.

Career :
1969 Joined Tokyo Electric Power Company
1987 Manager, Nuclear Power Operation Section, Nuclear Power Generation Department
1990 Manager, London Office
1991 Deputy General Manager, London Office
1994 Manager and Chief Researcher, Nuclear Power R & D Center
1996 Deputy Site Manager, Kashiwazaki Kariwa Nuclear Power Station Construction Office
1997 General Manager, Nuclear Energy Administration Department
2000 General Manager, Nuclear Energy Programs Department
2001 Director, Site Manager, Kashiwazaki Kariwa Nuclear Power Station
2004 Managing Director
Deputy Chief Nuclear Officer

Tetsuo Hashimoto

Date of birth : November 26, 1941

Status : Professor of Faculty of Science, Niigata University

Academic career and employment :

BA(1960 ~ 1964)	Kanazawa University
MS(1964 ~ 1966)	Kanazawa University
Research Assistance (1966 ~ 1975)	Research Reactor Institute, Kyoto University
PhD (1974 ~)	Kyusyu University
Associate Professor (1975 ~ 1987)	Niigata University
Professor (1987 ~)	Niigata University

Koji Yamashita

Date of Birth : September 27, 1953

Education :

Mar. 1978	Graduated from Kyoto University, Faculty of Engineering (Department of Nuclear Engineering) Master of Engineering from Kyoto University,

Career :

Apr. 1978	Joined Ministry of International Trade and Industry (MITI)
May. 1983~Sep.1984	Governmental Expert on Reactor Operation (Ohi·Takahama) Nuclear Power Safety Administration Division, Agency of Natural Resources and Energy (ANRE/MITI)
Sep. 1984~Jan. 1987	Deputy Director, Nuclear Energy Industry Division, ANRE/MITI
Aug. 1988~Jun.1990	Deputy Director, Nuclear Power Safety Administration Division, ANRE/MITI
Jun. 1998~Jun.1999	Director, Research & Technology Division, Atomic Energy Bureau, Science and Technology Agency (STA)
Jul. 1999~Jan.2001	Director, Nuclear Reactor Regulation Division , Nuclear Safety Bureau, STA
Jan. 2001~Sep.2003	Director, Nuclear Emergency Preparedness Division, Nuclear and Industrial Safety Agency (NISA) , Ministry of Economy, Trade and Industry (METI)
Sep. 2003~	Deputy Director-General for Safety Examination, NISA/METI

SESSION 2

Keiji Kanda

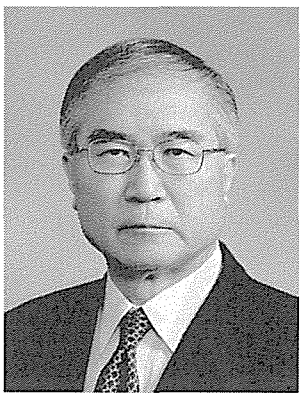
Year of Birth : 1938

Education :
1961 Received Bachelor of Arts from International Christian University
1966 Received PhD from Tokyo Institute of Technology

Career since 1966 includes :
Research Associate, Assistant Professor, Associate Professor, and Professor of Nuclear Material Control Research Reactor Institute, Kyoto University
Professor of Energy Policy Graduate School of Energy Science, Kyoto University
President, International Society for Neutron Radiography
President, The International Society for Neutron Capture Therapy Present Titles

Currently :
Director, Japan Energy Policy Institute / Professor Emeritus, Kyoto University / Professor, Musasbi Institute of Technology / Research Advisor, Central Research Institute of Electric Power Industry / Special Advisor, Atomic Energy Commission / Special Advisor, Nuclear Safety Commission

Decorations and Awards :
Awards of Atomic Energy Society of Japan (1983~, 2002 and 2003)
Decoration, Officier de l'Ordre National du Merite, France (1987)
Award, Science and Technology Agency Minister Prize (1999)
Award, Prime Minister Prize (2004)

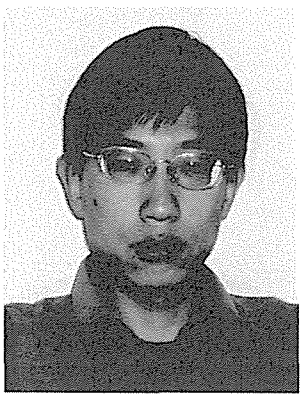


Takahiko Ito

Date of Birth : December 29, 1940

Education :
University of Tokyo Tokyo, Japan
Mar.'64 Bachelor of Electronic Engineering

Professional Experience :
Apr. '64 ~ Present Chubu Electric Power Co., INC Nagoya, Japan
Jun. '04 ~ Present Executive Vice President & Director, Division Manager of Power Generation Division
Jun. '03 ~ Jun. '04 Managing Director, Division Manager of Power Generation Division
Jun. '01 ~ Jun. '03 Managing Director
Jun. '97 ~ Jun. '01 Director, General Manager of Hamaoka Central Administration Office
Jul. '93 ~ Jun. '97 Senior General Manager, General Manager of Hamaoka Nuclear Power Station
Jul. '92 ~ Jul. '93 Deputy General Manager of Hamaoka Nuclear Power Station

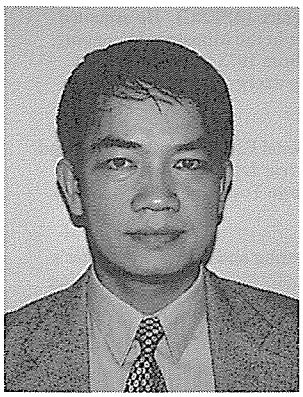


Xin Feng

Date of Birth : Sep 10, 1972

Education :
Bachelor
Graduated from Xi'an Jiatong University in 1994.

Working experience :
From 1994 to 2000, working in the China Institute of Atomic Energy
From 2000 to nowadays, working in the Department of Nuclear Power of China National Nuclear Corporation



Tran C. Thanh

Education :
Graduated from Moscow Power Engineering Institute in 1989(specialized in nuclear power plants and installations : Awarded Master of Science in Engineering)

Professional Experience :

1989～1990	Energy Science and Technique Center (Under Vietnam National Institute for Sciences, now called Vietnam Scientific and Technological Academy) Researcher of Thermal Technique Department Duty : Thermal exchanges in the drying processes and application in Vietnam
1990～1991	Programming Center "SOFTEX" (belongs to National Institute for Technologies") Software Engineer (mainly in Pascal language) Duty : Programming on "English-Vietnamese Translator" software "EVTrans"
1991～1992	New Technology Corporation -COTEC (Under Vietnam National Institute for Sciences, South Office) Technical official Duty : Participation in several power projects (Hydropower plants Thac Mo, Yaly; Transmission Line 500 kV etc.)
1992～2001	International Center for Scientific and Technical Information (ICSTI) Scientific Collaborator of ICSTI, Representative of New Technology Corporation - COTEC Duty : Energy scientific and technical information for Vietnam
2002～	Institute of Energy (Electricity of Vietnam, Ministry of Industry) Researcher of Nuclear, thermal power plant and environment department Main duty : Responsible for the Pre-feasibility study on first nuclear power plant in Vietnam

Jhun S. Joo

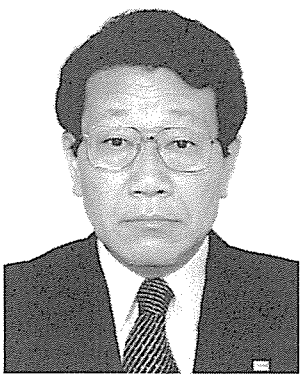
Nationality : Republic of Korea (South Korea)

Birth Date : June 1, 1949

Education :
Feb.1975 : B.E. in Mechanical Engineering, Seoul National University

Work Experiences :

04/2001 ~ Present	Korea Hydro & Nuclear Power Co.,Ltd
12/2004 ~ Present	General Manager / Project Department
03/2003 ~ 12/2004	General Manager / Shinwolsong Construction Office, Wolsong Nuclear Power Division
04/2001 ~ 03/2003	Project Manager / Shinkori Units 1&2 Project Office,
02/1975 ~ 03/2001	Korea Electric Power Corporation
02/2000	Manager / New Nuclear Project Team
02/1995	Chief Manager / Kepco Toronto Office (Canada)
09/1985	Senior Manager / Mechanical Dept. Younggwang Unit #1,2 Construction Office,



Masao Niwano

Date of Birth : October 4, 1944

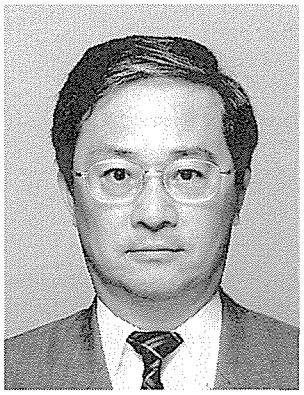
Present Position : Executive Officer
Corporate Senior Vice President
President and CEO
Industrial and Power Systems & Services Company

Educational Background :

Mar.1968	Graduated from Mechanical Engineering of Tokyo University
Mar.1970	Master's Degree in Mechanical Engineering of Tokyo University

Career Experiences :

Apr. 1970	Joined Toshiba Corporation
Apr. 1994	Senior Manager, Nuclear System Design & Engineering Department
Apr. 1996	Senior Manager, LWR Plant Project Engineering Department
Sep. 1998	General Manager, Corporate Management Innovation Division
Jan. 2000	Vice President Nuclear Energy Systems & Services Division
Jun. 2000	Corporate Vice President Executive Vice President Power Systems & Services Company
Apr. 2003	Corporate Vice President President and CEO Industrial and Power Systems & Services Company
Jun. 2003	Executive Officer Corporate Senior Vice President President and CEO Industrial and Power Systems & Services Company

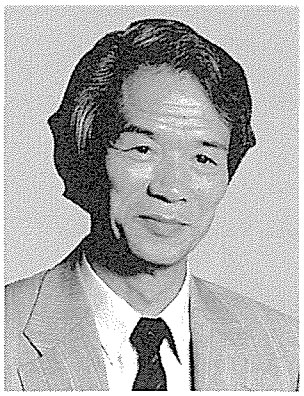


Masaharu Fujitomi

Mr. Masaharu FUJITOMI is the President of Asia Pacific Energy Research Centre (APERC). He assumed this post in October 2002. Before joining APERC, he had made a successful career in the Ministry of Economy, Trade and Industry (former Ministry of International Trade and Industry; MITI) from 1973 to summer 2002. During his tour to MITI, he had involved in various areas in energy field including energy technology R & D, rural electrification in Asia, nuclear safety, and energy policy in general.

While serving in the MITI, he was once seconded to the Paris based International Energy Agency (IEA), and worked as Principal Administrator of Research and Development Division for nuclear fusion between 1984 and 1987. He took the initiative to reach the Cooperative Agreement for the Three Large Tokamak Nuclear Fusion Facilities.

Mr. FUJITOMI graduated from Waseda University with a Bachelor in Engineering and received a Master's degree in Business Administration from the University of Pennsylvania. He is happily married with a son, living in Tokyo, Japan.



Sueo Machi

Birth of Date: January 15, 1934

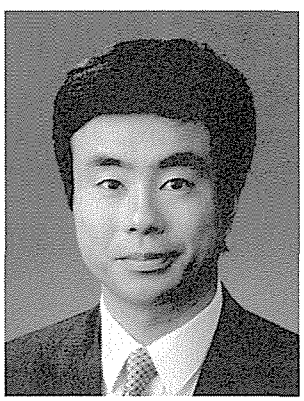
2004 January	Commissioner, Atomic Energy Commission
2001 July~2003	Councilor of Atomic Energy Commission
2000 July~	FNCA Coordinator of Japan Senior Managing Director, Japan Atomic Industrial Forum, Inc. (JAIF)
1991~2000	Deputy Director General, Head of the Department of Research and Isotope (*), IAEA (*) In 1998, it was renamed to the Department of Nuclear Science and Application
1988~1991	Director General, Takasaki Radiation Chemistry Research Establishment, Japan Atomic Energy Research Institute
1980~1983	Head, Section of Industrial Application and Chemistry, International Atomic Energy Agency (IAEA)

Academic Degree : Doctor of Engineering from the Kyoto University 1967

Research Activities for 25 years: application of radiation technology for new polymer products and environmental protection, and on radiation effects on materials used in nuclear facilities.

Achievements :
Invention and development of battery separator using the radiation technology which is used for commercial production; invention and development of technology to clean flue gases from coal and oil burning power plants using electron beams. Industrial scale plants using this flue gas cleaning technology are in operation in Poland, China and Japan (from Jan. 2002).

Awards:
Award of Japan Chemical Society 1968, Iwatani Memorial Award 1989, Award of Minister of Science and Technology 1989, Doctor Honoris Causa, Polytechnic University of Bucharest 1995, Life-time Achievement Award of International Meeting on Radiation Processing 1997, Medal with Purple Ribbon (Japan) May 2000



Tadao Yanase

Date of Birth: July 17, 1961

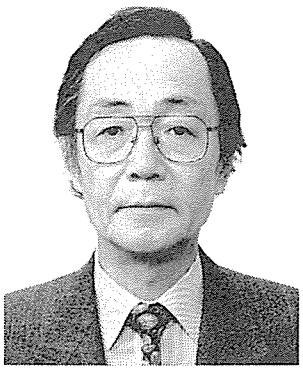
Academic Background

1992	Master's degree at Yale University, in International and Development Economics
1984	Bachelor's degree at Tokyo University, in Law

Professional Experience

2004~	Director for Nuclear energy Policy, Electricity and Gas Industry Department, ANRE, METI
2002~2004	Chief of Staff to the Director-General of Economic and Industrial Policy Bureau, METI · Design the new macroeconomic and industrial policies, including human resources development, financing and tax policies for the industrial competitiveness.
1999~2002	Special Advisor to MITI (renamed as METI in 2001) in USA Director, Industrial Research, Japan External Trade Organization · Special representative of MITI's whole policies, such as trade matters and macro-economic policy.
1998~1999	Chairman of METI's junior board meeting
1996~1999	Executive Deputy Director, Policy Coordination Division, Minister's Secretariat, · Placed the direction and priorities of the whole MITI's policies.
1994~1996	Deputy Director, Automobile Division, Machinery and Information Industries Bureau · Played a key role to negotiate with Japanese auto companies in the US-Japan Auto Talks.
1992~1994	Deputy Director, International Trade Division, Consumer Goods and Service Industry Bureau · Negotiator for textile in WTO-process ("Uruguay Round")
1984	Joined the Ministry of International Trade and Industry (MITI)

SESSION 3



Hiroyuki Torii

Year of Birth : 1942

Education :

1967	Graduated from Faculty of Engineering, The University of Tokyo
1969	Master of Engineering, The University of Tokyo

Professional Career :

1969~1976	Scientific News Correspondent to Nihon Keizai Shimbun (Nikkei)
1976~1982	Industrial News Correspondent to Nikkei
1982~1984	Scientific News Correspondent to Nikkei
1984~1987	Senior Fellow, Nikkei Industry Research Institute Editor-in-chief of Nikkei Hitech Report
1987~2002	Editorial Writer, Nihon Keizai Shimbun
2002~	Visiting Professor, Research Center for Advanced Science and Technology, The University of Tokyo
2002~	Professor, Research Laboratory for Nuclear Reactors Tokyo Institute of Technology

Yoshio Hirata

Date of Birth : July 14, 1941

Education :

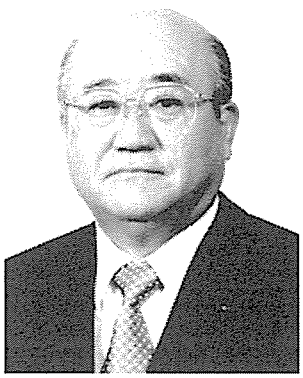
Mar.,1964	Shibaura Institute of Technology, Dept. of Technology and Electronics

Experience in Kansai Electric Power Co., Inc.(KEPCO)

Apr., 1964	Joined KEPCO
Jun., 1983	Manager, Dept. of Atomic Energy Administration
Jun., 1986	Assistant General Manager, Dept. of Atomic Energy Plannning
Dec.,1987	(Federation of Electric Power Companies-External Assignment)
Jun., 1989	General Manager, Dept. of Atomic Energy Plannning
Jun., 1992	General Manager, Mihama Power Plant
Jun., 1996	Chief Manager

Experience in Japan Nuclear Fuel Ltd.

Jun., 1996	Director, Dept. of Reprocessing, Rokkasho Center
Jun., 1999	Executive Director, Dept. of Reprocessing, Rokkasho Center
Jun., 2001	Senior Executive Director, Dept. of Reprocessing, Rokkasho Center
Aug.,2001	Senior Executive Director, Dept. of Reprocessing
Jun., 2004	Executive Vice President



Yuichi Tonozuka

Date of birth : March 31, 1937

Title/Position : President, Japan Nuclear Cycle Development Institute (JNC)
Special Advisor, Chubu Electric Power Co., Inc

Education :

1960. 3	Faculty of Economics, Keio University

Career :

1960. 4	Chubu Electric Power Co., Inc
1981. 7	Manager, Labor Department
1983. 7	Associate Manager of Hamaoka Nuclear Power Station and Hamaoka Nuclear Power Plant Construction Office
1986. 3	Power Reactor and Nuclear Fuel Development Corporation (PNC) Secretary to The President
1989. 7	Chubu Electric Power Co., Inc Senior General Manager, Information and Public Affairs Department
1991. 6	Director, Acting General Manager of Plant Siting and Environmental Affairs Bureau
1995. 6	Managing Director
1997. 6	The Federation Of Electric Power Companies Senior Managing Director Chubu Electric Power Co., Inc Director (treated as Managing Director)
1999. 6	The Federation Of Electric Power Companies Senior Managing Director Chubu Electric Power Co., Inc Director (treated as Vice President)
2001. 6	Eiraku Auto Service Co., Ltd President and Director Chubu Electric Power Co., Inc Advisor
2003. 6	Japan Nuclear Cycle Development Institute (JNC) Executive Vice President
2004. 1	Japan Nuclear Cycle Development Institute (JNC) President

Q & A with the citizens

Yoshiko Tsutiya

Date of Birth : October 31, 1956

Education :
Graduated from Faculty of Law, Keio University

Occupational Career :
She has the career of newscaster, started at TV Shizuoka and later became a freelance newscaster. She has been on various TV programs as a newscaster including those of NHK.

Yuki Aomi

Year of Birth : 1933

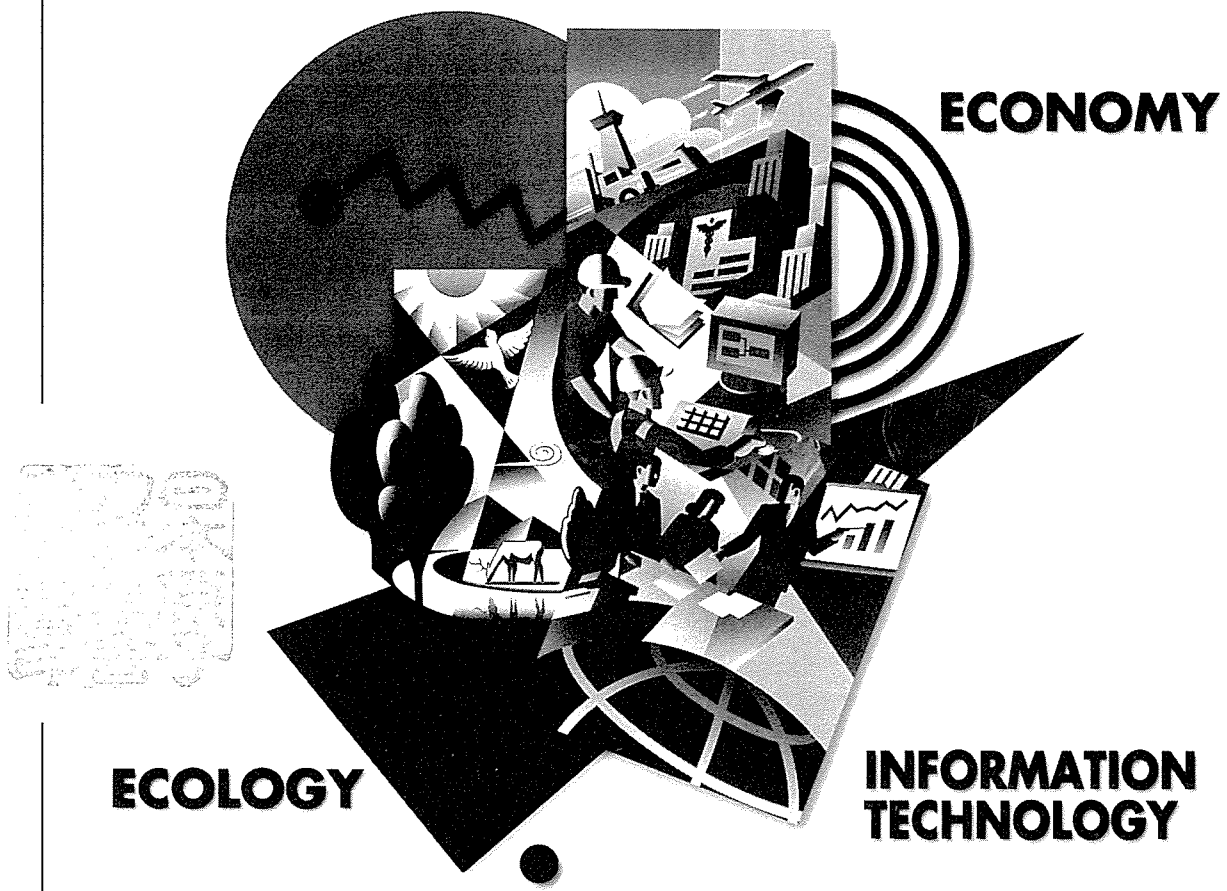
Present Position :
Member of WEN (Women's Energy Network), and Advisory Specialist for Consumers' Affairs

Education :

1955 Graduated from Tokyo University, Aesthetics, Dept. of Literature.
1957 Joined Radio-Tokyo (now TBS), engaged in production, as director, of TV programs of cultural contents, home, children, cooking, etc.
1967 Joining my husband, moved to New York City to live for 3 years.
1970 Returned to Tokyo.
1977 Joined TEPCO (Tokyo Electric Power Co.) as advisory staff, working in Sales Department. (retired in 1996)
1979 Joined House Foods Co., assigned to HEIB Section as a food-advisor, specializing in promotion of spices, giving advises to product planning development, and to promotional publications (retired in 2001).
1981 Became a MITI-Qualified advisory specialist for consumers' affairs (one of the first-qualified group).
1993 Associating myself with creating WEN (Women's Energy Network), an organization for women working in companies, governmental agencies, and other organizations related to energies and nuclear industry. Became the Representative of the Network after inauguration.
2000 Resigned from Representative of WEN.
2001 Received WIN-Award for Outstanding Information About Nuclear Energy. Continuing to work as free-lance advisor.

MITSUBISHI ELECTRIC

Changes for the Better



Energy Solutions for the 21st Century

In town, at home, in the office . . . Mitsubishi Electric supports the energy supply by putting environmentally friendly ideas into practice.

Energy is an essential part of our daily lives, and we at Mitsubishi Electric are working to provide 21st century solutions that meet the increasing diverse and complex energy requirements of our customers.

ECOLOGY
By developing cleaner sources of energy that help prevent global warming, we are contributing to the preservation of the Earth's precious and beautiful environment.

ECONOMY
Our relentless search for greater economy is leading to solutions that maximize cost performance by utilizing valuable energy resources more efficiently.

INFORMATION TECHNOLOGY
We are exploiting our preeminence in information technology to make advanced energy networking a reality.

MITSUBISHI ELECTRIC CORPORATION POWER SYSTEMS MARKETING DIVISION : 2-2-3 MARUNOUCHI CHIYODA-KU TOKYO 100-8310. JAPAN

SHOULD WE CONTINUE TO MINE ?

All energy resouces are lmited.
If continue mining at this pace, they will be exhausted before long.
Remaining deposits of oil and natural gas are about 50 or 60 years,
uranium is about 70 years, and coal, which is relatively abundant, is about 200 years.
But uranium, as a fuel for nuclear power plants, can be recycled to 96% of its original amount.
When we reuse uranium, it becomes more efficient in producing power.
Up to now we have used a large quantity of fossil fuel at the expense of our environment.
For the development and posterity of our nation and the earth,
it is time to switch to more efficient, clean and long lasting nuclear energy.

ENERGY CREATED BY TECHNOLOGY
MITSUBISHI PWR NUCLEAR POWER PLANT

MITSUBISHI HEAVY INDUSTRIES, LTD.
Nuclear Energy Systems Headquarters:
16-5, Konan 2-chome, Minato-ku, Tokyo 108-8215, Japan Phone: 81-3-6716-3111 Facsimile: 81-3-6716-5858