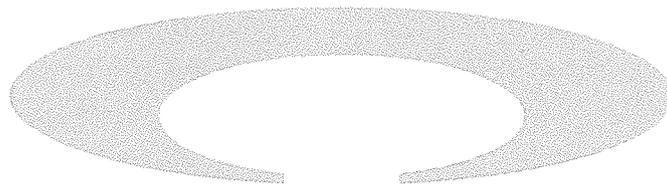
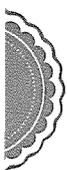


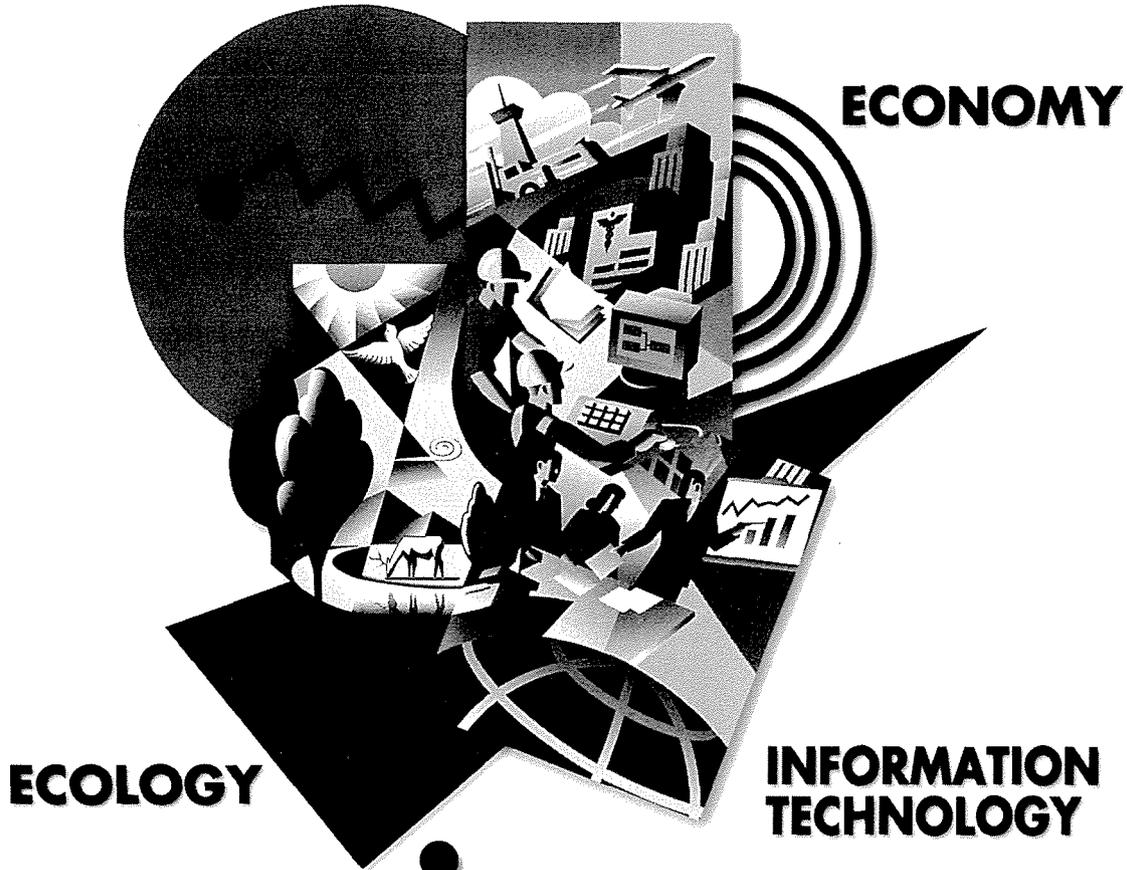
The 39th JAIF ANNUAL CONFERENCE ABSTRACTS



April 26~28, 2006
Pacifico Yokohama, Kanagawa, Japan

JAPAN ATOMIC INDUSTRIAL FORUM





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.

第39原産年次大会 予稿集 主要変更点一覧
Major changes in the 39th JAIF Annual Conference Abstracts

項目(Item)	変更前 (Before change)	変更後 (After change)
開会セッション	文部科学大臣所感 小坂憲次 文部科学大臣	文部科学大臣所感(代読) 森口泰孝 文部科学省研究開発局長
	科学技術政策担当大臣所感 松田岩夫 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)
	経済産業大臣所感 二階俊博 経済産業大臣	経済産業副大臣所感 松あきら 経済産業副大臣
特別講演	-----	「国際原子力エネルギーパートナーシップ(GNEP)」 V. レイス 米国エネルギー省(DOE) 長官付上級顧問
Opening Session	Kerji Kosaka Minister of Education, Culture, Sports, Science and Technology	Yasutaka Moriguchi Director General, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology (To read text for Minister Kosaka)
	Iwao Matsuda Minister of State for Science and Technology Policy	Bunro Shiozawa Deputy Director General for Science and Technology, Cabinet Office (To read text for Minister Matsuda)
	Toshihiro Nikai Minister of Economy, Trade and Industry	Akira Matsu Senior Vice Minister of Economy, Trade and Industry
Special Presentations	-----	“The Global Nuclear Energy Partnership” Victor Reis, Senior Advisor, Office of the Secretary, U.S. Department of Energy



松 あきら 氏

生年月日 1947年12月3日
本籍地 神奈川県
学歴 横浜雙葉学園高等学校1年終了後、宝塚音楽学校に入学し卒業
主な職歴 1966年 宝塚歌劇団入団
1978年 宝塚歌劇団花組のトップスターとなる
1995年7月 参議院神奈川選挙区初当選
2001年7月 参議院神奈川選挙区再選
2002年1月 経済産業大臣政務官
2003年 参議院行政監視委員長
公明党女性局長
公明党神奈川県本部代表代行
2005年11月 経済産業副大臣

Akira Matsu

Born: December 3, 1947
Birth Place: Kanagawa Prefecture
Education: Graduated from Takarazuka Music School
Career: 1966 Entered Takarazuka Review Company
1978 Became a Top Star of the Flower Troupe of Takarazuka Review Company
1995 Elected to the House of Councillors (HC)
2001 Reelected to the House of Councillors (HC)
2002 Parliamentary Secretary for Economy, Trade and Industry
2003 Chair, Committee on Oversight of Administration, HC
Director, Women's Bureau, Komeito
Acting Representative, Komeito Kanagawa
2005 Senior Vice Minister of Economy, Trade and Industry

ビクター・レイス氏

レイス氏は現在、米国エネルギー省（DOE）において、主に国際原子力エネルギーパートナーシップ（GNEP）とブッシュ大統領の先進的エネルギー・イニシアティブを一部担当する長官付上級顧問を務めている。米国戦略軍の戦略諮問グループのメンバーでもある。

レイス氏は、1957年にレンセラー技術工科大学を卒業後、58年にはエール大学において機械工学での修士号を取得。1962年には、プリンストン大学で文学修士と博士号を取得している。

1991年～1993年には、国防総省の防衛研究・工学部長であり、国防長官の首席顧問として、科学技術に関する事項、基礎・応用研究、研究所、防衛兵器システムの初期段階の開発、に携わった。核兵器評議会議長の経験も有する。

1993年～1999年には、エネルギー省（DOE）で防衛プログラム担当次官補を務め、備蓄核兵器維持管理計画の策定に主導的な役割を果たした。

1999年～2005年には、サイエンス・アプリケーション・インターナショナル（SAIC）社が完全所有するヒックス・アンド・アソシエイツ社の上級副社長を務め、核戦略プロジェクトを主導した。

Victor H. Reis

Victor H. Reis is Senior Advisor, Office of the Secretary, Department of Energy, with primary responsibility for the Global Nuclear Energy Partnership, part of President George W. Bush's Advanced Energy Initiative. He is also a member Strategic Advisory Group of the U.S. Strategic Command.

From 1999 to 2005 Reis was Senior Vice President of Hicks and Associates, Inc., a wholly owned subsidiary of Science Applications International Corporation (SAIC), where he led the Nuclear Strategies Project.

Reis served as Assistant Secretary for Defense Programs in the U.S. Department of Energy from 1993 to 1999, where he lead the development of the DOE's Stockpile Stewardship Program. From 1991 to 1993 he was Director of Defense Research and Engineering (DDR&E) at the Pentagon, the principal advisor in the Office of the Secretary of Defense for scientific and technical matters, basic and applied research, laboratories and early development of defense weapons systems. He also chaired the Nuclear Weapons Council.

Reis earned a B.M.E. in Mechanical Engineering from the Rensselaer Polytechnic Institute, (1957) an M.Eng. in Mechanical Engineering from Yale University (1958); and an M.A. and Ph.D.(1962) from Princeton University. His many awards include two Department of Defense Distinguished Public Service Medals. He has authored numerous scientific and policy publications.

SUMMARY

“IAEA’s Mission for Nuclear Technology, Safety, Security and Safeguards
in the Revitalization of Nuclear Energy”

Tomihiko Taniguchi

Deputy Director General, Department of Nuclear Safety and Security
International Atomic Energy Agency (IAEA)

- Challenging world and challenges to the international nuclear community and the IAEA
 - Globalization and Counter-globalization
 - Sustainable development – Security of energy supply - Assurance of supply of nuclear technology and fuel
 - Growing concerns over the effects of global warming
 - High expectations of a Nuclear Renaissance
- A global sharing of common visions and commitments are indispensable to achieve world peace and sustainable development.
- IAEA’s role as the focal point for convergence of common visions and commitments for the peaceful, safe and secure use of nuclear technology.
- A holistic approach is required to deal with the IAEA’s three pillars, which are Nuclear Technology, Safety and Security, and Safeguards.
- Global Nuclear Safety Regime since the Chernobyl in 1986
 - We are all in the same boat now.
 - Another serious nuclear accident will jeopardize any prospect for the Nuclear Renaissance.
 - International cooperation and commitments
 - Legally binding and non-binding instruments
 - IAEA Safety Standards and Review Services
- Global Nuclear Security Regime since 9/11 in 2001
- Global Nuclear Safety and Security Regime as a fully integrated regime will emerge.
- Role of Japan
 - Asia as a natural leading region for the Nuclear Renaissance
 - Visible political leadership for a new international framework and arrangement
 - Active contribution to and interaction with the Nuclear Renaissance

Summary

Takahiko Ito

Chairman, Nuclear Development Steering Committee

The Federation of Electric Power Companies of Japan

(Executive Vice President & Director, CHUBU ELECTRIC POWER Co., INC)

1. Recognition of nuclear power

(1) World's energy and nuclear power

- Re-evaluation of nuclear power from the perspective of energy security, preventing global warming, and others
- An international framework for nuclear non-proliferation is sought.

(2) Nuclear power in Japan

- A clear roadmap was determined by the Framework for Nuclear Energy Policy.
- We are concentrating on continuing efforts to win back public confidence.
- In the liberalization of the electric power industry, policy incentives are necessary to avoid risks that are unaffordable in the private sector.

2. View of electric power industry

(1) The role of nuclear power

- Nuclear power is important from the perspectives of energy security and the environment. With the guarantee of safety as a major prerequisite, nuclear power should move forward steadily.
- In the liberalization of the electric power industry, investments in nuclear power are management judgment issues of commercial enterprises.
- In order to make nuclear power attractive, we need not only to make efforts within the company (improving capacity factor, economic efficiency, etc.), there also need to be policy incentives for the purpose of avoiding risks and the like.

(2) Objectives and issues

① Objectives

- To make certain of steady progress and the tailwind in the recovery of public confidence.
- To make the role of nuclear power in the supply of energy even more unshakeable.

② Short-term issues

- a. To restore public confidence
- b. To improve the capacity factor of nuclear power stations
- c. To promote reprocessing at Rokkasho
- d. To promote the MOX fuel utilization in LWRs

③ Middle and long-term issues

- a. To develop a next-generation light water reactor that will be accepted worldwide
- b. Appropriate role with a view to the materialization of the fast breeder cycle
- c. Materialization of high level waste disposal

3. Expectations for Japan Atomic Industrial Forum (JAIF) and Japan Nuclear Technology Institute (JANTI)

(1) Expectations for JAIF

In order for nuclear power in Japan to stably supply energy over the long-term while gaining public confidence:

- To determine the long-term strategies of the entire nuclear power industry.
- To promote activities that will raise the standards of the overall understanding of the nuclear fuel cycle.
- To create an environment of activities for proposing regulations and the like.

(2) Expectations for JANTI

One year has passed since the establishment of JANTI and the projects of "information gathering, analysis, and practical application", "promotion of safety culture", "support and maintenance of private sector standards" are settling into orbit.

Our expectations are:

- Establishment of a technological foundation of nuclear power.
- Activities toward the materialization of regulations that are more scientific and more rational, based on a technological foundation.
- To shore up rock-solid public confidence in nuclear power.
- To strongly support the autonomous enhancement of safety promotion activities by plant operators through rational and scientific data and overwhelming technological strength

The Directions for Nuclear Energy Policy of Japan in Global Trends (Contents)

Tadao Yanase

Director, Nuclear Energy Policy Planning Division

Ministry of Economy, Trade and Industry (METI)

1. Construction of New, Additional and Replacement Nuclear Power Plants in the Context of Electricity Market Deregulation
 - Plans for Construction of New and Additional Plants
 - Countermeasures
2. Maintaining Technologies and Personnel
 - Current Situation and Issues
 - Countermeasures
3. International Development of the Japanese Nuclear Industry
 - Policy Implications
 - Countermeasures
4. Effective Use of Existing Reactors
5. FBR Cycle
 - Basic Policy and Current Efforts
 - Scenario for Commercialization
 - Roles of the Public Sectors for Commercialization
 - International Cooperation in FBR Cycle Technology Development
6. Non-Proliferation and the Peaceful Uses of Atomic Energy
 - Japan's Contribution and Efforts
 - Japan's Policy
7. The Direction of the Nuclear Power Industry
 - Basic Considerations
 - The Strategic Industrial Sectors - Nuclear Power Plants, Enrichment and Reprocessing
 - Industries Supporting Strategic Industrial Sectors - Reconversion, Fuel Fabrication, MOX Fuel Fabrication for LWRs, Recovered Uranium and Conversion –
 - Strategies for Securing Uranium Resources

Current Status and Future Prospects of Nuclear Power Development in India

S.K.Jain

Chairman & Managing Director

Nuclear Power Corporation of India Limited

India is home to 16% of world population. The country has made significant progress in various sectors with the gross domestic product (GDP) steadily increasing at 6-8% per annum. The electrical sector is poised to grow at about 6-7% per annum to match the 6-8% GDP growth. Thus a capacity addition of 10,000 MWe/year is required.

The installed capacity base consists of 67% thermal, 26% hydro, 5% renewable and 2% nuclear. Though thermal will be the main source of energy for several more decades, the country's nuclear power programme has been tailored to play a leading role in the decades to come.

NPCIL was formed in 1987 to accelerate the growth of nuclear power in the country. There are 15 reactors in operation with total installed capacity of 3260 MWe and 7 reactors are in construction to add 3420 MWe of nuclear power in near future. NPCIL is also fully responsible to do all the jobs from site selection, design, procurement, construction, commissioning, operation & maintenance, training and decommissioning.

A very systematic programme related to plant life extension and ageing management has been conducted at different plants of NPCIL. These plant upgrades and life extension efforts are expected to result in a total plant life of 40-60 years for Indian NPPs while meeting all safety requirements.

Presently seven more reactors are under construction at NPCIL and a target of 54 months has been fixed for commissioning of these units. Various measures have been taken to reduce the gestation period in all the construction projects of NPCIL.

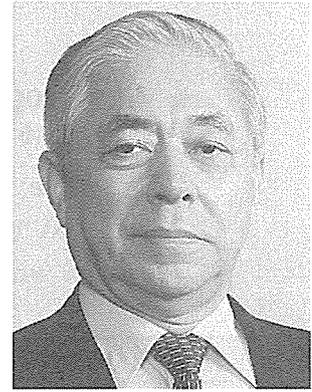
The future plan of NPCIL is to achieve 20,000 MWe by the year 2020 and the recent initiatives of the government open the possibility of 40,000 MWe capacity additions, as additionality to the local program. This is only possible with a combination of PHWRs, FBRs and LWRs.

Nuclear safety is of paramount focus at NPCIL and the safety culture has been built painstakingly over a period of time. International participation also helps NPCIL to ensure that the best industry practices are followed.

Notwithstanding the above excellence in operation and construction, which has resulted in a major turn around at NPCIL, we still have challenges to overcome. Complacency, competition in the open market and retaining highly trained staff are some of the challenges at NPCIL.

We also look forward to Japanese industries participation in the Indian nuclear power program. Under the auspices of WANO, we should have free access to the Japanese NPPs for Technical Exchange visits, Peer Reviews etc. We would also like to collaborate in the field of FBRs, Tsunami & R&D issues and also exchange information on seismic studies & analysis. We have also interest to know more about methods for reduction in construction & commissioning period of new NPPs.

To conclude, it is time for nuclear power to be a major contributor to the fast growing Indian electricity demand and this is planned to be achieved by importing large size LWRs from the international market in the coming decade.



Jun-ichi Nishizawa
JAIF Chairman

The 39th JAIF Annual Conference

*Strengthening Foundation for Japanese Nuclear Industry
and its Revitalization : What the Future Requires Now ?*

On the occasion of the Japan Atomic Industrial Forum's fiftieth anniversary and its reformation, we cordially welcome you to the 39th JAIF Annual Conference in Yokohama.

Among recent trends is a revival of nuclear power development in the United States and Europe. Countries are increasingly becoming aware of importance of nuclear power in resolving competitions over energy resources that are expected to intensify in light of increased energy consumption in Asia and sharply increasing oil and gas prices. In Japan, the Atomic Energy Commission formulated the Framework for Nuclear Energy Policy last October, therefore, it is important for both the public and private sectors to steadily carry out nuclear R&D and utilization, in line with the principles.

The JAIF was relaunched on April 1, after years' of efforts for reorganization and reformation. As a nucleus for diverse private industries involved in the utilization of nuclear energy, and with the active participation of its members, the new JAIF, too, will have to tackle various issues in a responsible way if they are to be resolved.

Convened against this background and hoping to generate waves through the nuclear renaissance, this JAIF Annual Conference will discuss in detail various measures to strengthen foundation of the nuclear industry and revitalize it, and issue a summary statement for all sessions on the final day.



Program of the 39th JAIF Annual Conference

*Main Theme: Strengthening Foundation for Japanese Nuclear Industry
and its Revitalization : What the Future Requires Now ?*

Wednesday, April 26	Thursday, April 27	Friday, April 28
	<u>Session 1</u> (9:30~12:30) Nuclear Industry on a Plateau: What' s Next Step	<u>Session 3</u> (9:30~12:30) Ensuring the Highest Level of Safety and a Path to Further Improved Inspection Regime
Registration (13:30~)	Lunch Break (12:30~14:15)	Lunch Break (12:30~14:00)
<u>Opening Session</u> (14:00~15:00)	<u>Session 2</u> (14:15~17:15) Global Nuclear Dynamism and How the World Sees Japan	<u>Session 4</u> (14:00~17:00) Nuclear Renaissance in Japan
<u>Special Presentations</u> (15:15~18:00)		
<u>Reception</u> (18:15~19:45) (Ball Room, Intercontinental The Grand Yokohama)		

Program of the 39th JAIF Annual Conference

*Main Theme: Strengthening Foundation for Japanese Nuclear Industry
and its Revitalization : What the Future Requires Now ?*

Wednesday, April 26 Afternoon

【Opening Session】 14:00–15:00

Chairperson: Tsutomu Kanai, Vice Chairman, Japan Atomic Industrial Forum (JAIF)
Chairman Emeritus, Hitachi Ltd.

JAIF Chairman's Address

- Jun-ichi Nishizawa, Chairman, JAIF

Remarks by government ministers

- Kenji Kosaka, Minister for Education, Culture, Sports, Science and Technology
- Iwao Matsuda, Minister of State for Science and Technology Policy
- Toshihiro Nikai, Minister for Economy, Trade and Industry (requesting)

【Special Presentation】 15:15 – 18:00

Chairperson: Yoshihiko Sumi, Director, JAIF; Counselor, Japan Atomic Power Company

Speakers:

- “IAEA’s Mission for Technology, Safety, Security, and Non-proliferation in Revitalization of Nuclear Energy”
Tomihiko Taniguchi, Deputy Director General, Head of Dept. of Nuclear Safety and Security, International Atomic Energy Agency (IAEA)
- “Accelerating the Nuclear Renaissance: The Essential Challenge of Global Sustainable Development”
John Ritch, Director General, The World Nuclear Association (WNA)
- “Nuclear development policy and international strategy of Russia”
Viadimir A. Smirnov, Adviser of the Russian Atomic Energy Agency (ROSATOM)
- “Stakes for Nuclear Renaissance”
Philippe Pradel, Director of Nuclear Energy, French Atomic Energy Commission (CEA)
- “The American Nuclear Renaissance: Today and Tomorrow”
Angelina Howard, Vice President, Nuclear Energy Institute (NEI)

【Reception】 18:15 – 19:30

At Ball Room, Intercontinental The Grand Yokohama 3rd floor

Thursday, April 27

【Session 1】 9:30 – 12:30 “Nuclear Industry on a Plateau: What’s Next Step”

Nuclear development – specifically, the widespread use of light water reactors – has achieved a certain level of “maturity,” while today’s nuclear industry faces challenges to its competitiveness and in lowered confidence among the people, compared with other energy sources. All parties should make concerted efforts to strengthen the nuclear infrastructure and revitalize the industry, raising it and moving it beyond its current plateau.

This session will first summarize the 50-year history of nuclear development and use in Japan. The historical rise now having leveled off, participants will then turn to the roles various organizations will have to play in order to revitalize the nuclear industry, strengthen its foundation, and move upward again. The mission of new JAIF – its part in the larger effort – will also be considered.

Chairperson: Hiroyuki Torii, Director, JAIF ; Professor, Tokyo Institute of Technology

<Presentations >

- “Nuclear Industry on a Plateau: Its Role in the Past; the Issues to be Resolved” Yumi Akimoto, Chairman of Committee on Energy & Resources, Japan Business Federation; Chief Executive Emeritus, Mitsubishi Materials Corp.
- “JAIF: Leading the Way as the Private Nuclear Industry Takes the Next Step Up— A New Mission Based on a 50-Year History” Masao Takuma, Executive Vice Chairman, JAIF

<Panel discussion>

- Takahiko Ito, Chairman of Nuclear Development Steering Committee, Federation of Electric Power Companies
- Isami Kojima, President, Japan Nuclear Fuel Limited
- Shozo Saito, Chairman of Nuclear Energy Steering Committee, Japan Electric Manufacturers’ Association
- Yuichi Tonzuka, President, Japan Atomic Energy Agency

【Session 2】 14:15 – 17:15 “Global Nuclear Dynamism and How the World Sees Japan”

Given such factors as global warming, growing energy consumption mainly in the Asian region, and sharp rises in oil prices, nuclear power has increasingly drawn global attention both for its environmental significance and in terms of availability of resources. In the Asian region, countries where electricity demand is expected to increase most sharply are stepping up their introduction or expansion of nuclear generation. In response to that, nuclear equipment manufacturers and suppliers in Europe and the United States are gearing up as well.

In this session, international nuclear industry will present the latest information on their dynamic development of nuclear business, and will discuss what they expect from Japanese industry. In this way, the session will provide an opportunity to think about Japan’s role in a

global context – beyond revitalizing the nuclear industry domestically.

Chairperson: Mitsuo Arai, Journalist

< Speech >

- “Japanese Nuclear in the International Environment” Tadao Yanase, Director, Nuclear Energy Policy Planning Division, Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry

<Presentations and discussion>

- “Current Status and Future Prospects of Nuclear Power Development in India” Shreyans Kumar Jain, Chairman and Managing Director, Nuclear Power Corporation of India Limited
- “UK Nuclear Energy and Decommissioning – NDA and International Bidding” Ron Gorham, Head of Competition of Procurement, Nuclear Decommissioning Authority (NDA)
- “How Nuclear Japan Looks from Outside” Tomihiro Taniguchi, Deputy Director General, Head of Dept. of Nuclear Safety and Security, International Atomic Energy Agency (IAEA)

Friday, April 28

【Session 3】 9:30 – 12:30 “Ensuring the Highest Level of Safety and a Path to Further Improved Inspection Regime”

It is important for nuclear power production to ensure world first class safety and return its advantages to the community by contributing to the stable supply of electricity. To this end, essential is constant efforts of all stakeholders, including the construction of scientifically and practically balanced regulation regimes and operators' safety preservation activities for maximum exploitation of existing production units thereby.

This session discusses, upon reviewing existing regulation practices, ensuring measures of the highest level of safety and upgraded regulations based upon improved regulation rules. Feasible paths towards public understanding thereof are also explored on the agenda.

Chairperson: Masao Nakamura, Science Journalist

<Panel discussion>

- Kiyoto Aizawa, Senior Advisor, Japan Atomic Energy Agency
- Kenkichi Hirose, Director General, Nuclear and Industrial Safety Agency, METI
- Michio Ishikawa, President, Japan Nuclear Technology Institute
- Naoto Sekimura, Professor, University of Tokyo
- Ichiro Takekuro, Managing Director, Tokyo Electric Power Company

Commentator: Angelina Howard, Vice President, Nuclear Energy Institute, U.S.A.

【Session 4】 14:00– 17:00 “Nuclear Renaissance in Japan”

Nuclear Renaissance is in place in Europe and U.S., taking off the bottom: Nuclear policy changes to promotion; and positive incentives to new nuclear power plant constructions. Nuclear Renaissance is yet to get inertia in Japan, despite the Framework for Nuclear Energy Policy authorized in October 2005 and paving a way to expanded nuclear energy utilization. Public trust in nuclear energy is yet in a recovery stage to be firmly restored.

This session explores what should be done now for nuclear Renaissance in Japan to incubate and to accelerate, based on presentations on expectations in future nuclear power and visions towards it by representatives from the central and local governments and public sectors.

Chairperson: Norihisa Ito, Senior Managing Director, Federation of Electric Power Companies

<Presentations and discussion>

- Noriko Ishioka, Assistant Principal Researcher, Japan Atomic Energy Agency
- “Contribution of Nuclear Energy to Energy Security” Yukitaka Kato, Associate Professor, Tokyo Institute of Technology

- “Prospering with Nuclear Energy” Takaaki Kotani, Mayor of Oarai Town
- Harukuni Tanaka, General Manager, Nuclear Power Dept., Federation of Electric Power Companies
- “Atoms for Peace, Peace by Atom” Tomohiko Kita, General Manager, Dept. of Information & Communication, Japan Atomic Industrial Forum (JAIF)

【Announcement of “Conference Statement”】

- Nobuo Ishizuka, Senior Managing Director, Japan Atomic Industrial Forum (JAIF)

Wednesday, April 26

Opening Session

JAIF Chairman's Address & Remarks by government ministers

14:00-15:00

Chairperson

**Tsutomu Kanai, Vice Chairman, Japan Atomic Industrial Forum (JAIF)
Chairman Emeritus, Hitachi Ltd.**

Remarks

Wednesday, April 26

Special Presentations

15:15-18:00

Chairperson

Yoshihiko Sumi, Director, JAIF; Counselor, Japan Atomic Power Company

**IAEA's Mission for Technology, Safety, Security, and Non-proliferation
in Revitalization of Nuclear Energy**

Tomihiko Taniguchi

**Deputy Director General, Head of Dept. of Nuclear Safety and Security,
International Atomic Energy Agency (IAEA)**

**Accelerating the Nuclear Renaissance:
The Essential Challenge of Global Sustainable Development
John Ritch
Director General, The World Nuclear Association (WNA)**

The rebirth of nuclear energy has become an unmistakable reality that is gathering speed and momentum on the full world stage.

All around the world, old-school anti-nuclear environmentalism is being eclipsed by a new realism that recognises nuclear energy's essential virtue: its capacity to deliver cleanly generated power safely, reliably, and on a massive scale.

For serious environmentalists, the real challenge is that nuclear energy is not yet growing fast enough to play its needed role in the clean-energy revolution our world so desperately needs.

A fair assessment shows that not one of the commonly cited "public concerns" poses a reasonable obstacle to a global expansion of nuclear power: Proliferation, Operational Safety, Cost Reduction, Waste Management.

In three areas, governments must take decisive action to grow the nuclear industry: (1) Construct a comprehensive global regime to curtail greenhouse emissions; (2) Elevate nuclear investment to a national and international policy priority; and (3) Support educational development of the nuclear profession for an expanded global role.

The global nuclear industry will be indispensable if humanity is to preserve the environment that enabled civilisation to evolve. Governments must emerge from postures of timidity and equivocation to act decisively in support of that industry. Our world is in dire peril, and we have no time to lose.

Nuclear development policy and international strategy of Russia

Viadimir A. Smirnov

Adviser of the Russian Atomic Energy Agency(ROSATOM)

Stakes for Nuclear Renaissance

Philippe Pradel

Director of Nuclear Energy, French Atomic Energy Commission (CEA)

For the 21st century, whatever scenario is considered, the global energy needs are still growing, and the risk of climate change is a reality : the correlation between earth temperature and carbon dioxide emissions is now proven. Sustainable scenarios have to obey the following three major criteria as closely as possible : limiting CO₂ emissions, energy supply and access to energy for underprivileged populations. Nuclear energy is a competitive, safe and environment friendly method of electricity generation, which will play a key role in this growing global need for energy. France has been developing since 1974 an ambitious electronuclear program, which allows this country to operate nowadays one of the most recent fleets of nuclear reactors in the world. This achievement leads to build a strategy for the future, including advanced LWRs (Gen III) like EPR plants (already scheduled in Finland and France), and research and development on Gen IV systems, mainly on closed fuel cycle and fast neutron systems.

France made the choice of recycling uranium and plutonium from nuclear spent fuels and this recycling strategy implemented in France today is a responsible management of nuclear spent fuel. This strategy affords the advantage of reducing both waste volumes and radiotoxicity, as well as it saves natural resources.

An overview is given about the French nuclear policy : the 2005 Energy Act, two public debates on waste management and EPR plant, and the new act, following the first one voted in 1991, that frames research and development on long lived wastes.

As far as future nuclear systems are concerned, the development of a sustainable nuclear energy should satisfy at least three main criteria, saving natural resources, minimizing waste and offering high level of security (resistance to proliferation and physical protection).

The French R&D strategy for future nuclear energy system which has been built through the GIF framework according to these criteria is presented. Some examples are given, concerning the two main tracks followed in parallel, both of them on fast neutron reactors and closed fuel cycle: sodium fast reactor (SFR) and gas fast reactor (GFR).

To support three generations of nuclear plants (from Gen II to Gen IV)

up-to-date research infrastructures are needed: irradiation tools such as JHR project are necessary and a large range of reactors (from material testing reactors to demonstration prototypes, like the one announced by President Chirac by 2020) have to be considered. Beside these means which may involve international partnership, to answer the challenges bound to nuclear renaissance also implies R&D programs internationally shared in a large cooperative framework.

The American Nuclear Renaissance: Today and Tomorrow

Angelina Howard

Vice President, Nuclear Energy Institute (NEI)

The resurgence in interest in building new nuclear power plants in the U.S. is the culmination of a number of long and short-term trends: rising fossil fuel prices, and extreme volatility in natural gas markets; demand for new sources of baseload electric power as America's electric infrastructure continues to age; and increasing environmental constraints, including the distinct possibility of carbon controls.

Over the past 25 years, the American nuclear industry has dramatically improved its performance, reaching new records in production, safety and efficiency. Because of this strong record, the industry is poised to take advantage of the opportunity that presents itself today. However, because the nuclear industry is a truly global -- and that's the case whether we are talking about nuclear fuel, operational performance, new plant designs, manufacturing of components or managing waste products -- no single nation will be able to go it alone. But by working together, the industry can continue to improve its performance through openness, transparency and information exchange with each other and with our various publics and governments. In the case of the U.S. and Japan, there are several areas of potential cooperation.

In this presentation, Ms. Howard will give an update on the latest performance trends in the U.S. reactor fleet, outline plans for new reactor build and review the state of the public policy landscape in Washington as the Bush Administration launches the Global Nuclear Energy Partnership and works with the U.S. Congress to achieve passage of the Nuclear Fuel Management and Disposal Act, legislation designed to facilitate the opening of the Yucca Mountain repository in Nevada.

Thursday, April 27

Session 1

“Nuclear Industry on a Plateau: What’s Next Step”

9:30-12:30

Chairperson

Hiroyuki Torii, Director, JAIF ; Professor, Tokyo Institute of Technology

Nuclear Industry on a Plateau: Its Role in the Past; the Issues to be Resolved

Yumi Akimoto

**Chairman of Committee on Energy & Resources, Japan Business Federation;
Chief Executive Emeritus, Mitsubishi Materials Corp.**

In every time, the welfare and prosperity of a nation – or its decline and the decay of its culture – is affected mightily by availability of energy to support its activities.

In this century, environmental and geopolitical risks associated with natural resources, which threaten the safe supply of energy, have been revealed globally. Amidst rapidly changing energy conditions, the situation has arisen wherein the United States, China and many other countries are competing aggressively with each other in order to ensure stable energy supplies according to their individual national interests.

Among all the various energy strategies being carried out by the various countries, reevaluations of the role of nuclear energy are the most noteworthy. Twenty years after the Chernobyl accident definitively marked the arrival of the “winter years” for nuclear power generation, the world has at last come to realize that the images propagated by anti-nuclear activists and nuclear deterrence politicians are groundless. The world is now beginning to move toward active use of a unique and unparalleled energy source.

Nuclear power can generate a tremendous amount of electricity from a very small physical resource, and, through recycling, the practical benefits of that resource can be increased by more than an order of magnitude. In addition, nuclear power generation emits no carbon dioxide, as the burning of fossil fuels does. For Japan, a major economic power lacking in domestic energy resources, the energy-security significance of nuclear energy is even greater than for most other countries.

After the global Oil Shocks, in fact, when disruption of energy supplies became a reality, Japan concentrated its efforts on building nuclear power plants so as to get rid itself of dependency on oil from the Middle East. When , the U.S.’s Carter administration initiated a so-called “plutonium moratorium.” In an attempt to allay the unfounded apprehensions of the United States, Japan appealed to the world, arguing the significance of the nuclear fuel cycle. It also took upon itself an enhanced safeguards obligation and sought to develop its own proliferation-resistant technology – holding firm to its positive position on the nuclear fuel cycle.

Japan’s nuclear-rooted energy security framework was thus built up. Its flaw was, however, revealed in the 1990s when the “bubble economy” collapsed and advocacy of market mechanisms became rampant. Today, the capacity factors of Japanese nuclear power plants are much below those in the United States and Korea, where they are typically 90% and higher, and

the share of nuclear generation in total generated electricity is less than half what it is in France, with which Japan was on a par at the time of the Oil Shocks.

To cope with the sharply changing international energy situation, a move has just begun in Japan, too, to again position nuclear energy – endangered beneath the wave of deregulation sweeping across the electricity market – as a key pillar of a national energy strategy. In order to overcome the current global energy crisis, however, a way of thinking different from the conventional – different from the inward-looking to satisfy narrow interests of a country with limited natural resources – is required, along with a system to unify efforts to meet the more immediate energy challenge.

Being the only non-nuclear-weapons nation allowed to fully implement the nuclear fuel cycle, Japan should actively contribute to creating an international energy strategy – together with other technologically advanced countries – not merely to satisfy its exceptional position, but to be a model of nuclear use for peaceful purposes within the international community.

**JAIF: Leading the Way as the Private Nuclear Industry Takes the Next Step Up
— A New Mission Based on a 50-Year History—**

Masao Takuma

Executive Vice Chairman, JAIF

Changes in societal attitudes toward nuclear energy from the 20th to 21st century, and the relationship between nuclear energy and society, will be studied. In 1956, the first stages of nuclear development were launched in both the private and public sectors, and the Japan Atomic Industrial Forum, Inc. (JAIF), was established through a unified effort of private nuclear industries as a private, non-profit entity. This session will examine the role of JAIF and how that role has changed in the course of its 50-year history.

At the end of the 20th century, the relationship between technology and society turned tense. Today, in that continuing circumstance, it is nuclear technology – in some ways a symbol of advanced technology – that, after coming out of its own ten-year slump, is expected to forge a new society-technology relationship for a global population that will soon reach 9 billion. The private-sector industry should proactively respond to this expectation.

The Japan Atomic Industrial Forum itself has been relaunched after reorganization and reform, with a small but important modification in its Japanese-language name. What will JAIF have to do, working together with its member companies – fulfilling what tasks, with what mission? – to help strengthen private infrastructure and revitalize the industry? Animated discussions can be expected on goals and measures under the current vision, on the upgrading of future activities, and on the future of the new JAIF as a more responsive, private, non-profit organization.

Purport
Takahiko Ito
Chairman of Nuclear Development Steering Committee,
Federation of Electric Power Companies

Progress of nuclear fuel cycle business at JNFL and expectation of the reborn JAIF

Isami Kojima

President, Japan Nuclear Fuel Limited (JNFL)

1. Introduction

- Status quo of nuclear fuel cycle business

2. Current Status of the JNFL reprocessing plant

- Outline of Active test
- Present situation of the plant under the active testing
- Challenges towards the commercial operation

3. Expectation of the reborn Japan Atomic Industrial Forum (JAIF)

**Efforts to Tackle Nuclear Energy Issues by Manufacturers and
Expectations for a new Japan Atomic Industrial Forum**

Shozo Saito

**Chairman of Nuclear Energy Steering Committee,
The Japan Electric Manufacturers' Association**

As noted in the Framework for Nuclear Energy Policy, nuclear power will remain a key source of electric power production far into the future, and its importance and necessity is vital when viewed from the standpoint of addressing the issues of securing a stable supply of energy and solving environmental problems. The Japan Electrical Manufacturers' Association is also playing its role as part of the nuclear energy industry with the awareness of the industry's important social mission.

1. Nuclear Energy Issues

Although nuclear power generation is recognized as an important source of electricity, in the mid- and the long-term, it remains unclear whether new nuclear power plants will be built due to a variety of changes in conditions such as the deregulation of electric utilities, the stagnation in the demand for electricity, and so forth. In the case of nuclear energy, due to the large scale of the projects and the large amount of time necessary to develop a nuclear power plant, it is necessary to clarify the issues, and the public and private sectors need to work together steadily in tackling the mid- and long-term goals.

2. Efforts on the Part of Manufacturers

The Electricity Industry Committee's Nuclear Energy Subcommittee, which is subsumed under Ministry of Economy, Trade and Industry's (METI) Advisory Committee for Natural Resources and Energy, is presently discussing concrete policies in order to realize the Framework for Nuclear Energy Policy that is based on an existing awareness of conditions such as those outlined above. Based on the course of the deliberations of the Nuclear Energy Subcommittee, nuclear power plant manufacturers will need to tackle the issues listed below.

1) Efficient Use of Existing Plants

- It will be important for manufacturers to address issues premised on ensuring the safe and stable operation of these plants in order to move forward positively in upgrading operation and maintenance. Some of the related issues that need to be addressed include flexible period of continuous operation, increasing rated output, developing measures to counteract aging of the plants, etc.
- Manufacturers will have to move forward with the development of necessary technologies (inspection and monitoring technologies, condition-based maintenance

technologies, aging preventative maintenance technologies, etc.), as well as working together to develop codes and standards.

2) Development of Next-Generation Reactors

- It is expected that the development of a Japanese next-generation light water reactor, which will replace the current generation of reactors by around the year 2030, will move forward as a national project, and the manufacturers also hope to participate positively in this project.
- At the present stage, the merits of developing a Japanese next-generation reactor include economy, efficient use of resources, the reduction of amount of radioactive waste, and the reactor is expected to be developed competitive in the international nuclear reactor market.

3) Overseas Development

- There is an extremely close relationship between the national nuclear energy policy and the international development of nuclear power, and it is essential that the government make a positive contribution to this development.
- For example, at this point in time, countries such as Vietnam, Indonesia, et cetera are in need of institutional development assistance related specifically to nuclear power, and the public and private sectors should make efforts to provide tangible assistance.

4) Establishing the Nuclear Fuel Cycle

- It is important to promote the stable operation of the reprocessing plant in Rokkasho and the steady restart of the Monju fast breeder reactor (FBR) in the near term with the view of establishing the nuclear fuel cycle.
- Japan's goal is to develop FBR cycle technology that will be internationally competitive and a technology that anticipates global standardization. In light of this, it will be crucial to develop sound international cooperation strategies.
- Manufacturers hope to cooperate and participate positively in research and development with the government and the Japan Atomic Energy Agency focusing on design and production technologies, etc.

3. Expectations for a new Japan Atomic Industrial Forum

With respect to nuclear power, it is necessary to win back the trust of society, increase public understanding of the importance of nuclear power and upgrade the asset quality of the industry. Consequently, the industry must undergo a change in consciousness, and accompanying this, the nuclear power industry must function to communicate its opinions and ideas to the outside.

Another hope is to see the Japan Atomic Industrial Forum, which is composed of electric utilities, manufacturers, research and development institutions, and other various institutions related to nuclear power, making up an association that features a variety of organizations and

viewpoints. This association would serve the function to create a huge wave of opinion that would promote nuclear power as being in the national interest of the entire country.

Consequently, we expect the Japan Atomic Industrial Forum to act independently and strategically to transmit the policy proposals and ideas to the national government. In addition to this, we also hope the association functions to communicate them to the general public including local government bodies as well as to the mass media.

The Japan Atomic Industrial Forum has up to now played an important role in Japan's international cooperation activities related to nuclear power, and in the future, with international cooperation activities increasing in importance, it is expected that the association will continue to play an important role.

Purport
Yuichi Tonzuka
President, Japan Atomic Energy Agency

Thursday, April 27

Session 2

“Global Nuclear Dynamism and How the World Sees Japan”

14:15-17:15

Chairperson

Mitsuo Arai, Journalist

**Japanese Policy for Promoting Nuclear Exports and
Contribution to International Cooperation**

Tadao Yanase

**Director, Nuclear Energy Policy Planning Division, Agency of Natural Resources and Energy,
Ministry of Economy, Trade and Industry**

Current Status and Future Prospects of Nuclear Power Development in India
Shreyans Kumar Jain
Chairman and Managing Director, Nuclear Power Corporation of India Limited

India is home to 16% of world population. The country has made significant progress in various sectors with the gross domestic product (GDP) steadily increasing at 6-8% per annum. The electrical sector is poised to grow at about 6-7% per annum to match the 6-8% GDP growth. Thus a capacity addition of 10,000 MWe/year is required.

The installed capacity base consists of 67% thermal, 26% hydro, 5% renewable and 2% nuclear. Though thermal will be the main source of energy for several more decades, the country's nuclear power programme has been tailored to play a leading role in the decades to come.

NPCIL was formed in 1987 to accelerate the growth of nuclear power in the country. There are 15 reactors in operation with total installed capacity of 3260 MWe and 7 reactors are in construction to add 3420 MWe of nuclear power in near future. NPCIL is also fully responsible to do all the jobs from site selection, design, procurement, construction, commissioning, operation & maintenance, training and decommissioning.

A very systematic programme related to plant life extension and ageing management has been conducted at different plants of NPCIL. These plant upgrades and life extension efforts are expected to result in a total plant life of 40-60 years for Indian NPPs while meeting all safety requirements.

Presently seven more reactors are under construction at NPCIL and a target of 54 months has been fixed for commissioning of these units. Various measures have been taken to reduce the gestation period in all the construction projects of NPCIL.

The future plan of NPCIL is to achieve 20,000 MWe by the year 2020 and the recent initiatives of the government open the possibility of 40,000 MWe capacity additions, as additionality to the local program. This is only possible with a combination of PHWRs, FBRs and LWRs.

UK Nuclear Energy and Decommissioning – NDA and International Bidding

Ron Gorham

Head of Competition of Procurement, Nuclear Decommissioning Authority (NDA)

The Nuclear Decommissioning Authority (NDA) was established by the UK Government in April 2005 to undertake one of the most important environmental clean up programmes in the UK. The presentation will explain the UK energy situation and the background to the NDA, describe its role and the means of delivering its remit. The talk will also describe business opportunities available to Japanese Companies in this new UK decommissioning market.

How Nuclear Japan Looks from Outside

Tomihiko Taniguchi

Deputy Director General, Head of Dept. of Nuclear Safety and Security, International Atomic Energy Agency (IAEA)

1. Invisible Japan from outside, why?

- Low presence in the nuclear political world and international market for its real power
- Messages in low gear (Delivery, Grasping, Conveyance)
 - Innovate bi-directional powerful actions (outwards and inwards), what and how?

2. For visibility, be pro-active, with good insight into outside world, on what?

- In-depth insights into globalization/localization, integrated security, sustainability, international markets, new world regimes/institutions/framework
- Be pro-active outwards (AEC new policy-making committee, JAIF recommendations)

3. For better visibility, be more pro-active, how?

- Ensure unique and excellent technologies by international, universal and scientific policies and management
- Participate pro-actively in framework building for next generations to come
- Build reliability: Openness; Transparency (frankness; perceptibility; sincerity); Conviction; and Magnanimity
- Integrate international strategies towards nuclear “Regeneration” and “Renewing”

4. Utilize and live on world nuclear dynamism for Japan’s nuclear revitalization and strengthening (Opportunities and Traps)

- Insight into power balance in the new world dynamism
- How to react ahead to dynamism?
- Matured, deep-rooted policies and its steady but ensured implementation

(Expectations of new JAIF international roles)

Friday, April 28

Session 3

**“Ensuring the Highest Level of Safety and a Path to Further Improved Inspection
Regime”**

9:30-12:30

Chairperson

Masao Nakamura, Science Journalist

Consideration on Realization of the Highest Safety Level of NPPs and Additional Improvement of Inspection system for NPPs in Japan

Kiyoto Aizawa

Senior Advisor, Japan Atomic Energy Agency

Availability factors of nuclear power plants (NPPs) in overseas countries show significant improvement for recent ten years. Especially, in United States, availability factors of NPPs increased rapidly from 70% in 1997 to 91% in 2004. In France, about 80% of the total electricity is generated by NPPs which are operated as load follower power generators and are thus brought smaller values of availability factors. Nevertheless, NPPs in France show higher availability factor values compared with those in Japan. From the viewpoint of availability factors of NPPs in Japan, it can be called that NPPs in Japan were placed in the lost ten years, just same as the economy after the bubble collapse in Japan. Employee annual exposure dose rates (AEDR; man-Sv/year) also show same tendency. Japan succeeded to construct NPPs which enable the lowest AEDR in the world from early nineteenth eightieth to early nineteenth ninetieth, but thereafter, AEDRs at NPPs in Japan show non-decreasing tendency and thus exceed those in United States and France for recent ten years.

It goes without saying that primary responsibility of ensuring safety at nuclear facilities owe to the licensees. The licensees have to establish definite recognition regarding importance of safety culture from the top of the organization to the technical personnel work at the facilities belonged and to implement voluntary safeguard activities, such as quality assurance, quality management, etc., as a part of top management activities. Nuclear safety network activities are recognized as effective ones for that purpose. The typical examples for NPPs are WANO's peer review activities. In order to ensure nuclear safety at the highest level in the world and to improve the adequacy of the inspection system at NPPs, enhancement of scientific rationality in nuclear safety regulation system is essential in addition to soundness of voluntary safeguard activities by licensees. And accountability and open discussions on safety issues become important premises in case of enhancing scientific rationality in nuclear safety regulation system.

For establishment of the safety regulations with enhanced scientific rationality by applying risk-informed regulation and of voluntary safeguard activities by the licensees, research organization undertakes an important role. Research organization also undertakes an important role to maintain and offer testing facility/equipment for necessary data acquisition, to train professionals/experts and to transfer key technologies.

The Japan Atomic Energy Agency (JAEA), as a unique research organization which conducts researches from fundamental fields to applied R&D fields for commercialization of nuclear energy systems in Japan, is implementing above-mentioned R&D activities and is expected to contribute significantly to the regulatory activities through implementing the national safety research plan. In addition, JAEA dispatches experts to related committees/conferences

operated by the Nuclear Safety Commission of Japan, the Nuclear and Industrial Safety Agency under the auspices of METI, related societies /associations or international organizations for promotion of those activities.

Followings are notable issues for realization of enhanced scientific rationality and useful and efficient nuclear safety regulations:

- establishment of safety regulation infrastructure : (a) Sophistication of safety evaluation methods and PRA methods, (b) Development of related databases
- Development/sophistication of safety standards, guidelines, practices and goals through trial application studies of risk-informed regulation
- Operation and inspection of operating NPPs: (a) Optimization of targets, items and contents for inspection, (b) Deliberation of adequate description of items in operation- al safety program, (c) requirements for implementation of on-line maintenanc

**Toward Reform of the Inspection System and
Achieving the Highest Level of Safety in the World**

Kenkichi Hirose

Director General, Nuclear and Industrial Safety Agency, METI

The Nuclear and Industrial Safety Agency (NISA) was established in January 2001, and since that time NISA has been studying the system of inspections for nuclear facilities.

NISA began looking at the inspection system by setting up an inspection system study committee in December 2001, under the Nuclear and Industrial Safety Subcommittee, the Advisory Committee for Natural Resources and Energy. In June 2002 the study committee issued an interim report titled "Toward Revising the Inspection System."

The interim report listed seven general recommendations for improving the inspection system, as well as a recommendation on improving individual inspection schemes.

Based on these recommendations and the lessons learned from incidents of fraud related to voluntary inspections, and in accordance with amendments to the Law on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors, and the Electricity Utilities Industry Law, NISA introduced a new inspection system in October 2003. The new regime focused on promoting reforms in regulations, operations, and maintenance management through incorporating a quality assurance system, audit-style inspections, and utilization of an independent administrative agency as the main authority responsible for implementing inspections.

After two years have passed from introduction of the new inspection scheme, NISA decided to examine the status of inspection activities and efforts by both private companies and regulatory authorities, with the goal of exploring improvements to the inspection system in order to further enhance the level of safety. In November 2005, NISA reactivated the inspection system study committee, which is focusing primarily on 1) the balance between inspections in operation of the plant and those during shutdown of the plant; 2) a system of inspection for evaluating companies' overall safety activities appropriately; 3) enhanced testing procedures for aging plants; and related topics.

The committee will look at current trends in technical progress in the area of facility safety study, and will also study approaches to a system of inspections that further enhances safety through effective utilization of NISA's limited resources. It plans to issue a report around June 2006.

In addition, in order to implement safety regulations in an efficient and effective manner,

NISA will continue its efforts in the following areas: establishment of regulatory criteria for interim storage facilities, safety regulations for high level radioactive waste, enhanced international cooperation among Asian countries, training and education related to safety regulations, and strengthened collaboration with authorities concerned with safety.

Purport
Michio Ishikawa
President, Japan Nuclear Technology Institute

Forty years have passed since the start of the nuclear power generation program. The nuclear energy industry has achieved technological advancement, and successfully developed power plants with outstanding safety performance. In terms of probability, our industry is 1,000 to 10,000 times less likely to have accident fatalities than other industries. Power plants of such advanced safety have been formed with our predecessors' efforts to compile safety research/guidelines and improve safety assessment, and completed through a series of reviews based on lessons learned from a few accidents, as well as cooperation/coordination of the international community. Let me firstly highlight the fact that today's stable nuclear energy operations around the globe are built on the safety of nuclear power facilities.

The challenge of today's nuclear energy industry is how it can operate these facilities at increased safety and efficiency. It is humans that operate power plants. Since humans are not objects, they cannot be expected to enhance safety performance 1,000 or 10,000 fold, like power generation facilities may achieve. Past regulations seemed to have demanded this, and failed. Defining detailed safety rules and imposing compliance, would only deprive businesses and plant operators of motivation.

Recognizing this mistake, the United States led other nations in relaxing its regulations. European countries followed suit. Consequently, these countries have dramatically enhanced their safety performance, and subsequently improved business results. Unfortunately, Japan failed to follow the lead. A series of problems including the JCO incident, TEPCO scandals and Mihama accident, stirred up public criticism of nuclear power generation, inviting even tighter regulations. In order to improve the situation, the nuclear energy industry must make the public recognize its all-out efforts for safety. JANTI is an independent organization created for this very purpose. We are committed to maintaining a third-party stance, rather than becoming too closely associated with either the public or private sector, in implementing activities for reinforcing nuclear safety.

Systematic Maintenance for Safety, Engineering, Regulation and Human Resource
Naoto Sekimura
Professor, University of Tokyo

Nuclear power plants which have become infrastructure in Japan are required to provide safety and to be accepted by people in addition to achieve their major function of stable energy supply. Complicated industrial products made of huge number of components tend to have weaker correlation between the function of the system and each component. Engineering data and knowledge increase rapidly within the subdivided field of engineering, however, tend to be enclosed within the narrow field.

Technical information and knowledge base for the design, construction, operation and maintenance of nuclear power plants should be utilized comprehensively not only for utilities but also regulation. There are 3 different categories of activities to utilize engineering knowledge for stable, safe and economical operation of the plants. Technical information on operation and maintenance engineering should be collected as database. To put knowledge to practical use, the systematic information systems including codes and standards should be established. This information system should be also put into practice for operation and maintenance in plant sites. It should also be emphasized that leading engineers who have synthesized knowledge are strongly required for safe and stable operation of nuclear power plants. This new frontier field can be called as “system maintenology” to synthesize engineering for safe and reliable operation of current and next generation of light water reactors.

“Road Map for Ageing and Plant Life Management” has been established in 2005 by the Special Committee in the Atomic Energy Society of Japan under the commission from the JNES. In the Road Map, the major research and development fields are categorized into the following 4 items; 1) research and development of technologies for inspection, evaluation and repair in the components and materials, 2) engineering information systems, 3) development of codes and standards and 4) synthesized maintenance engineering. The “synthesized maintenance engineering” field includes methodologies for optimum combination for inspection, maintenance actions and cost, definition of importance of components for maintenance, and performance index of power plant system. Studying and learning these systematic approaches is also indicated in the Road Map as one of the important issues for collaboration of industries, regulatory bodies and universities to keep leading engineers and to improve regulatory systems.

Development of technologies can be achieved not only in each field of engineering, but by synthesis of different approaches in many fields. Under the current situation of subdivided engineering and huge quantity of knowledge, systematic approaches to synthesize the complicated systems such as nuclear power plants are also required for better regulation and inspection.

Ensuring World-Class Safety and a Path to a Further Improved Inspection System

Ichiro Takekuro

Managing Director, Tokyo Electric Power Company

1. Basic Concept on Ensuring Nuclear Safety

It is basic that nuclear companies bear the responsibility, and engage in activities, for ensuring nuclear safety. To this end, the government (through regulation) needs to clearly present and advance the basic concepts of nuclear safety, and provide safety-standard targets that will serve as the foundation for activities by nuclear utilities.

The government and utilities should further enhance the transparency of their activities to ensure safety, as well as actively disclose information on a continuing basis, so as to meet their responsibilities of accountability to the people, both locally and nationally.

2. Efforts to Ensure Safety at Nuclear Power Plants

To comprehensively improve quality and ensure safety throughout the period when plants are in operation or outage, making proper use of risk assessments and performance indicators, as well as fostering safety culture.

To make nuclear power plants rewarding and attractive places to work.

- Optimal distribution of personnel and resources, etc., improvements to technology and skills, improvements based on creativity; i.e., enhancement of facility maintenance by making full use of available technical knowledge, including operational experience, monitoring and maintenance of conditions, etc., both domestically and overseas.
- Further efforts to make quality assurance activities to take root; development of private-sector standards and criteria for maintenance, etc.
- Sharing and utilization of the findings of reviews by third-party organizations, including the Japan Nuclear Technology Institute (JANTI), and various information on operations.

Recognizing that through continuation of these efforts it will be possible to achieve world-class safety and realize nuclear power plants whose performance is excellent in both safety and reliability, as envisioned in the Framework for Nuclear Energy Policies.

As a result, reliable operational performance will help demonstrate the superiority of nuclear power, both economically and environmentally, and contribute to stable supplies of energy for Japan and to measures to combat global warming.

3. Expectations for Improvement of the Inspection System

On the premise of safety activities by utilities, the basic concept of the current system to ensure nuclear safety and improve performance need to be rooted and then further developed, for which the following points are important:

- Since introduction of the new inspection system in October 2003, the burden at nuclear plant sites has greatly increased. In order to improve the situation, a project team consisting of the government and utilities has been working to improve its

implementation, and has begun to show some good results. It is, however, still necessary to provide a mechanism for better safety regulation based on a relationship of positive tension between regulators and utilities.

- The Inspection Systems should be able to cope flexibly and decisively with future developments in maintenance activities, even as the companies work to improve the quality their own activities – including reflecting technological progress and accumulation of experience and data, enhancement of plant-life management, etc. It should also be more effective in ensuring safety and quality, and be easy to understand.
- As a result of inspections, personnel at nuclear plants are better able to realize how quality has been improved through their efforts and are motivated to make further efforts to the same end.

Friday, April 28

Session 4

“Nuclear Renaissance in Japan”

14:00-17:00

Chairperson

Norihisa Ito, Senior Managing Director, Federation of Electric Power Companies

Effective Use of Radioactive Isotopes in the Life Sciences

Noriko S. Ishioka

Assistant Principal Researcher

Quantum Beam Science Directorate, Takasaki, Japan Atomic Energy Agency

Positive uses of radiation in various aspects of our daily lives are inseparable from the broader use of nuclear energy. In this presentation, I am going to talk about some of those applications, as well as about future uses of radiation, focusing on my own studies of radioactive isotopes in medicine and agriculture.

The Japan Atomic Energy Agency's Takasaki Advanced Radiation Research Institute is a key research base in the area of radiation use. Takasaki is engaged in a program of research using quantum beams – electrons, gamma particles and ions – as well as the radioactive nuclides produced through the use of such beams. Indeed, in recent years, expectations have only increased for applications of quantum beams in the life sciences in, for example, medicine and agriculture. In medicine, one aim is to establish a drug delivery system that can allow treatment to be better matched to the individual patient – so-called tailor-made treatment, jointly with Gunma University's Department of Medicine. For example, radioactive isotopes can be attached to antibodies specifically targeting cancer cells. The isotopes emit radiation effective in killing those cancer cells, without harming normal tissue.

In the agricultural area, positron-emitting nuclide tracers are fashioned for dynamic research on elements and compounds existing inside plants. The institute has succeeded in measuring on material migration in living plants using the Positron Emitting Tracer Imaging System (PETIS) originally developed by the institute itself. Most recently, with the hazardous effects of cadmium in rice on human health having become a matter of concern, the institute developed a method for producing ^{107}Cd nuclides to check for cadmium in rice. And, using PETIS, it succeeded for the first time anywhere in the world in imaging the intake of cadmium into a stalk of rice plant.

Heretofore, in economic terms, radiation use of nuclear energy has been seen as far less significant than energy use. Recent studies, however, have shown that radiation use generates equal or even greater economic effect than energy use – illustrating just how important radiation use is to each of us in our daily lives. I consider it important that we researchers demonstrate the usefulness of radiation applications, concurrently with the role of nuclear energy as an electricity source, as the first step toward changing peoples' awareness from “understanding” to “interest” – i.e., more than neutral acceptance or indifference. I, personally, would like to continue to demonstrate the practical value of radioactive isotopes and to help people understand the realities of radiation and nuclear energy, and thus, myself, to make a small contribution to the welfare of human society.

Contribution of Nuclear Energy to Energy Security

Yukitaka Kato

Associate Professor, Tokyo Institute of Technology

In a diversifying world, a secure energy resource is required for the sustainable economical prosperity of Japan. Nuclear power can be the most reliable candidate as the energy source. A possibility of nuclear power for sustaining the Japanese economical prosperity is discussed on the stand point of an energy option, security and technology.

Importance of energy security is increasing recently than ever in Japan because of worldwide rapid growth of energy demands and concern about the energy shortage. Because of its small amount of energy resources, Japanese economy is vulnerable to the energy shortage. The dilemma of meeting the Kyoto protocol and sustaining the economical growth is becoming more obvious. Energy consumption in the industry sector tends to decrease but those of public and transportation sectors are still increasing. Although Japan committed itself in the protocol to reduce the carbon dioxide (CO₂) emission, the total emission is still increasing. Major contributors to the increasing energy demand and CO₂ emission are service industries, such as IT technologies, 24 hour shops (“Convenience stores”) and punctual delivery services. Those service industry growths are bases of the recent prosperity of Japanese economy. Policies for reducing energy consumption and CO₂ emission may have risks to cause Japanese economy stagnation. To shift into a CO₂-free energy source is a key point for Japan’s sustainable prosperity. Nuclear energy for Japan would be the most reliable energy source from the economy and energy security viewpoints.

Alternative energy sources to fossil energy sources are required in sufficient amounts to ensure the country energy demands. It would be hard to ensure enough space for introducing renewable energy supply systems in narrow geographic conditions of Japan. Nuclear energy would be possible to meet the energy demand of the country. Nuclear hydrogen for vehicle use is one of new possibilities of multipurpose use of nuclear power. Technologies for efficient hydrogen (H₂) production and transportation are needed, because conventional high-pressurized hydrogen cylinders for fuel cell vehicles consume a large amount of energy for H₂ compression and have risks of an explosion. The author is proposing a “Carbon Recycle Type Nuclear Hydrogen Carrier System” which consumes low-energy, emits zero-CO₂, and has small explosion risks. Technologies of energy conversion and delivery from a high-density nuclear energy source to large numbers of small energy end-users are important for penetrating nuclear energy and establishing the country energy security.

Prospering with Nuclear Energy
Takaaki Kotani
Mayor of Oarai Town

Situated almost at the center of the Pacific coast of Ibaraki Prefecture, and benefiting from a mild climate, the town of Oarai developed historically based on fisheries and tourism. Tourism thrived on proximity to the greater Tokyo metropolitan area: The town has established itself as a resort destination known for ocean bathing and marine sports. In addition to its rich fisheries and oceanic resources and natural environment, Oarai enjoys a rewarding partnership with various nuclear-related facilities. And it sees the potential for even greater regional growth. In this sense, Oarai, although small, is something of a sparkling jewel.

Oarai's introduction to nuclear science came when a project was launched to improve the Oarai Harbor – designated an important national harbor. Radio isotopes were used in preliminary research on tides and the drifting of sands, essential for the improvement work. Seeing that, the town came to think of itself as a “nuclear cultural community.” It eventually invited what was then called the Japan Atomic Energy Research Institute to establish operations in the town. That was more than 40 years ago. Since then, the town and the nuclear industry have grown together, understanding and supporting each other. The town's citizens' charter includes the aim: “Constant Progress with Nuclear Energy.” When nuclear organizations were invited to operate in Oarai, the town itself worked to promote understanding of the people and to assist the organizations in acquiring sites for their facilities. The entire history, moreover, has given our citizens a clear understanding of the co-prosperity that exists between themselves and nuclear energy, which understanding has produced the current high level of mutual trust.

Yet while ensuring adequate energy resources is one of the most important challenges facing Japan, we cannot ignore the natural environment – most conspicuously, the threat represented by the phenomenon of global warming. Uranium resources – when part of a nuclear fuel cycle focusing on fast breeder reactors – have the potential to be an almost perpetual energy source, while significantly reducing the emission of greenhouse gases. I support the nuclear fuel cycle as a means both to ensure a stable supply of energy for the nation and to help preserve the global environment.

In cooperation with the Tokyo Institute of Technology, the Japan Atomic Energy Agency (JAEA) and others – industry, the public sector, academia – Oarai is working for the further growth of the region and the utilization of accumulated intellectual property and other resources for the betterment of the town.

Not only in Japan, but in the United States and Europe, attention is increasingly turning to the so-called “hydrogen economy” of the future, deemed even more environmentally compatible

and significant in the battle against global warming. JAEA's Oarai Research and Development Center, in the town, has succeeded in experiments in producing hydrogen using various methods with its high-temperature gas-cooled reactor (HTTR) and sodium-cooled reactor. Its work continues toward the goal of eventual production technology.

I expect a great deal to come from this research, and hope Oarai will remain at the center of R&D activities on hydrogen production, which will, in turn, draw still more industries to the town. Ultimately, as part of our vision to further invigorate the town, I would like a small fast breeder reactor to be built, one that will efficiently demonstrate the environmental advantage and be usable for multiple purposes, including power generation, and heat and hydrogen production. In this way, I would like to see Oarai take the lead in the global energy society and become even more prosperous.

Purport

Harukuni Tanaka

General Manager, Nuclear Power Dept., Federation of Electric Power Companies

Atoms for Peace, Peace by Atom
Tomohiko Kita
General Manager, Dept. of Information & Communication,
Japan Atomic Industrial Forum (JAIF)

The lack of “security” brings about various symptoms in the international community. Insufficient "human security" causes various problems resulting from the lack and poverty. Lack of "energy security" causes the confrontation and tension among countries which seek energy resources. Lack of “national security” causes desire to and dependence on stronger power and arms such as nuclear weapons. However, pursuit to nuclear weapon causes regional and global tensions as well as the deterioration of international relations, which results in even worsen national security of the countries that seek nuclear weapon program. The countries and the region can be caught in “a vicious circle” of national security and international relations, which we can observe in the situations of North Korea and that of Iran.

Nuclear technology and nuclear energy are considered to contribute greatly to the problem solving of “lack of security” issues, even though they are not cure-all. Because improved security means increased international peace, we should be able to expect that peace can be promoted by utilization of nuclear technology, i.e., “Atoms for Peace, Peace by Atom” international society.

First of all, radiation and radioisotope technologies offer technical solutions to human security problems, through problems solving in agriculture, water resources development, and the medicine. Radiation technology can develop better varieties of crops through mutation breeding, it can eliminate harmful insects such as tsetse flies and fruits flies, which results in better livestock farming and agriculture. Isotope hydrology provides safe drinking water in desert areas in the Middle East as well as in the area of the Bay of Bengal where groundwater is contaminated by toxic arsenic. Radiation therapy gives chance of recovery and life prolonging to cancer patients in the developing countries where such treatments have been difficult. These all lead to the sustainable development and improved human security.

Nuclear power provides huge energy security benefits to countries which utilize the energy. Uranium is widely distributed to countries which are politically stable. Relatively small amount of uranium produces huge amount of energy without CO₂ emission, which makes it easy for nuclear fuel to stockpile.

Developing countries in Asia such as China, India, Indonesia, and Vietnam plan either to expand or to introduce nuclear power. China plans to expand its nuclear power capacity to 40 million kW by 2020; and India plans 20 million kW by the same year. These countries not only utilize nuclear power to satisfy their electricity demands, but also value the energy security

benefits of nuclear power. Rapid expansion of nuclear power in India in cooperation with the United States is changing international non-proliferation regime as well.

So far as nuclear proliferation is a symptom caused by the lack of "national security", the solutions should include measures to address security concerns of the countries. The permanent members of the U. N. Security Council, which is comprised of five nuclear weapon states, must be united to show convincing evidences that nuclear proliferation and nuclear weapon program deteriorate national security of the countries concern. On the other hand, Security Council, in cooperation with other states, should prepare a "comprehensive policy package" to encourage the countries of proliferation concern to reconsider its nuclear weapon program. The package should include security assurance, assistance and cooperation to the return to international community, supply guarantee of nuclear technology and nuclear fuel, application of IAEA safeguards based on Additional Protocol for confidence building. Nuclear technology and nuclear power can be important parts of the package.

What Japan should do in this context?

First, Japan should be able to contribute to the improvement of human security in Southeast Asian countries through the cooperation to the applications of radiation and radioisotope technologies in agriculture, medicine, and industry.

Secondly, Japan must strengthen cooperation in nuclear power to Asian countries such as India, China, Vietnam, and Indonesia, which plan to expand or introduce nuclear power. We expect the production peak of oil in the foreseeable future, which will inevitably lead to higher oil prices. Expansion of nuclear power in those countries, where energy demands increase rapidly, will contribute to the energy security of the region as well as of the world.

Thirdly, Japan should be able to contribute to the formulation and implementation of "Policy Package", in cooperation with P-5 countries of the U.N. Security Council. As a part of the efforts, Japan should cooperate to the supply guarantee of nuclear technology and nuclear fuel. Japan's excellent experiences and technology in safeguards can be actively utilized, which would be an important part of "confidence building measures" to stabilize regional and global security.

Japan should take a lead in development and utilization of advanced light water reactors technology, advanced fuel cycle, and FBR fuel cycle, which have high safety, environmental fitness, good economics, and proliferation resistance. Development of such advanced nuclear technology can be one of the greatest contributions for the improved security of the world.

We stand in the doorway to the "Nuclear Renaissance" in the United States and in the rest of the world. Nuclear technology and nuclear power contribute not only to the enhanced energy

security through the supply of economic and stable power, but also to improved human security and national security.

Announcement of “Conference Statement”

Nobuo Ishizuka

Senior Managing Director, Japan Atomic Industrial Forum (JAIF)

Remarks

**List of Members of the Preparatory Committee
for the 39th JAIF Annual Conference**

The Preparatory Committee for the 39th JAIF Annual Conference

in alphabetical order
As of March 31, 2006

Members :

Keiko CHINO	Chief Editor, The Sankei Shimbun
Michio ISHIKAWA	Japan Nuclear Technology Institute
Takahiko ITO	Chairman of Nuclear Energy Development Committee, Federation of Electric Power Companies
Shozo SAITO	Chairman of Nuclear Energy Steering Committee, Japan Electric Manufacturers' Association
Tsutomi TOICHI	Managing Director, The Institute of Energy Economics, Japan
Yuichi TONOZUKA	President, Japan Atomic Energy Agency

Observers :

Yasuyoshi KOMIZO	Director, International Nuclear Energy Cooperation Division, Ministry of Foreign Affairs
Toru NAKAHARA	Director, Atomic Energy Division, Research and Development Bureau, Ministry of Education, Culture, Sports, Science and Technology
Kazuo TODANI	Director, Atomic Energy, Directorate General for Science and Technology Policy, Cabinet Office
Tadao YANASE	Director, Nuclear Energy Policy Planning Division, Agency of Natural Resources and Energy, Ministry of Economy, Trade and Industry

JAIF :

Jun-ichi NISHIZAWA	Chairman, Japan Atomic Industrial Forum (JAIF)
Masao TAKUMA	Executive Vice Chairman, JAIF
Nobuo ISHIZUKA	Senior Managing Director, JAIF
Gen-ichi SUZUKI	Director, JAIF

OPENING SESSION



Tsutomu Kanai

Dr. Tsutomu Kanai is Chairman Emeritus of Hitachi, Ltd., a post that he assumed in June 2005.

After joining Hitachi in 1958, he 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 Hitachi's power and industrial systems business. At that time, he also headed a corporate strategic committee for the company's global operations. He was elected President and Representative Director in 1991, and named to Chairman of the Board and Director in 1999. After Hitachi adopted the Committee System of Management, he continued to serve as Chairman of the Board from June 2003 until June 2005.

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 Professional Engineer in Nuclear Engineering (USA)



Jun-ichi Nishizawa

Year and Place of Birth: 1926, Sendai

<Professional>

1990(Apr.)- Emeritus Professor, Tohoku University
1996-2002(Mar.) Project Leader, Sendai Research Center, Telecommunication Advancement Organization of Japan
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
1983 Jack A. Morton Award from Institute of Electrical and Electronics Engineers (IEEE, U.S.A.)
1986 Honda Prize from Honda Foundation (International Prize)
1989 The International Organization of Crystal Growth (IOCG) Laudise Prize
1989 The Order of Cultural Merits (Bunka-Kunsho) conferred from Japanese Emperor
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
1996 Honorary Foreign Member of the Korean Academy of Science and Technology
2002 Foreign Member of the Yugoslav Academy of Engineering



Kenji Kosaka

Year of Birth: 1946, Nagano city, Nagano Prefecture

Member of the House of Representatives

Constituency: Nagano 1 (Elected 6 times)

Education:

Graduated in March 1968 from Keio University, Faculty of Law

Career:

1968 Employed by Japan Air Lines (JAL)
1984 Quitted JAL and returned home from London to enter into politics
1986 Secretary to Mr. Yasuhiro Nakasone, Prime Minister and LDP President
1990 Elected to the House of Representatives for the first time
1999 Senior State Secretary for Posts and Telecommunications
2000 Director, Committee on Communications
Chairman, Telecommunications Council, LDP
2000 Senior State Secretary for Posts and Telecommunications
2001 Senior Vice-Minister for Public Management, Home Affairs, Posts and Telecommunications
2002 Chairman of Committee on Financial Affairs, the House of Representatives
2003 Director, Standing committee on Rules and Administration, the House of Representatives
2004 Chief Deputy Chairman, Diet Affairs Committee, LDP
2005 Re-elected to the House of Representatives for the sixth time
2005 Minister of Education, Culture, Sports, Science and Technology



Iwao Matsuda

Born: 1937 in Gifu-City, Gifu Prefecture

Member of the House of Councilors

Constituency: Gifu Prefecture (Elected 2 times)

The House of Representatives (Elected 3 times)

Education:

1960 Graduated from Faculty of Law, the University of Tokyo

1964 The London School of Economics and Political Science

Career:

2005 Minister of State for Science and Technology Policy Minister of State for Food Safety Minister of State for Information Technology

2004 - 2005 Chairman of Research Committee on International Affairs Chief Secretary of Research Commission on Foreign Affairs

Acting Chairman of Special Committee on External Economic Cooperation

2004 Reelected to the House of Councilors (2nd term)

2002 - 2004 Chief Director of Committee on Economy and Industry

Jan.2001 - Sep.2001 Senior Vice Minister of Economy, Trade and Industry

Dec.2000 - Jan.2001 Senior State Secretary for International Trade and Industry

1998 Elected to the House of Councilors from Gifu Prefecture

1997 Distinguished Visiting Professor of The George Washington University

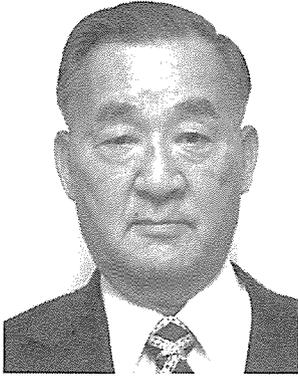
1993 Reelected to the House of Representatives (3rd term)

1991 - 1992 Parliamentary Vice Minister of Ministry of Education, Science, Culture and Sports

1990 Reelected to the House of Representatives (2nd term)

1986 Elected to the House of Representatives from Gifu Prefecture

SPECIAL PRESENTATIONS



Yoshihiko Sumi

Year of Birth 1930
Academic Career
1953 Graduated from Electrical Engineering, Kyoto University
Professional Career :
1953 Joined the Kansai Electric Power Co., Inc. AD
1971 Director of Kujyo Sales Office
1972 Resident Engineer in Indonesia as a Member of Newjtec Inc.
1974 Assistant General Manager, System Engineering Department
1977 General Manager, System Engineering Department
1979 General Manager, Central Office of High Voltage Transmission Construction Projects
1981 General Manager, Hokuriku District Office
1983 General Manager, Fukui Nuclear Power District Office
1985 Director as a Member of the Board, Fukui Nuclear Power District Office
1986 Director, Nuclear Operations
1987 Director, Nuclear Operations and Nuclear Construction
1988 Managing Director
1991 Senior Managing Director
1993 Executive Vice-President
1999 President of the Japan Atomic Power Company
2004 Counselor



Tomihiro Taniguchi

Mr. Taniguchi graduated from the University of Tokyo with a major in nuclear engineering in 1968 and joined the Ministry of International Trade and Industry in 1968. During his thirty year career there, he contributed to establishment and development of regulatory regime to enhance the efficiency and the safety of nuclear energy utilization. As Deputy Director General in charge of nuclear policy, he was the Japanese Government's chief administrative officer on all aspects of commercial use of nuclear energy, including safety and regulation.

Mr. Taniguchi's career at MITI included 12 years overseas working in international organizations and research institutions, including senior-level management and advanced research activities in the areas of energy, technology, and industry.

Prior to his appointment to Deputy Director General for Nuclear Safety at the IAEA in August 2001, Mr. Taniguchi was the Executive Director of the Nuclear Power Engineering Corporation (NUPEC), supporting MITI and the nuclear industry in the areas of safety and technology.

Mr. Taniguchi was also a Visiting Professor at the Graduate School of Engineering of the University of Tokyo from 1998 to 2001



Vladimir Smirnov

Vladimir Alexeevich Smirnov, born in 1957, graduated in 1980 from the Leningrad Institute of Aviation Instrument Building, majored in electromechanical engineering, holds PhD in Technical Sciences (1986) and Doctor of Economy (2000). (the author of ten inventions and 45 scientific proceedings).

Was elected as Director General of the Joint stock company "Techsnabexport" in 2002 and was appointed Adviser to Head and Director of the Russian Atomic Energy Agency (ROSATOM) in 2005. Mr. Smirnov is married and has three children.



John Ritch

John Ritch has been Director General of the World Nuclear Association since 2001. He has also been President of the World Nuclear University since its founding in 2003.

From 1993 to 2001, he represented President Clinton as American ambassador to the International Atomic Energy Agency and other UN organizations in Vienna.

Before joining the Clinton administration, Ambassador Ritch served 22 years as a senior advisor in the U.S. Senate, specializing in NATO strategy, East-West relations and nuclear arms control.

Previously, he was a captain in the United States Army infantry.

He has also been an entrepreneur, active in real estate development and in founding a multinational enterprise that markets nutritional supplements in 20 countries.

Ambassador Ritch is a graduate of West Point, where he was an academic All-American basketball player. He holds a master's degree in politics, philosophy and economics from Oxford University, where he studied as a Rhodes Scholar.



Philippe Pradel

Philippe PRADEL, age 49, a graduate of France's leading engineering school Ecole Polytechnique began his career with the French Atomic Energy Commission (CEA) as a research scientist on the SUPERPHENIX liquid metal fast breeder reactor and was part of the team that started up that reactor.

Mr. PRADEL joined COGEMA in 1987 as manager of start-up testing for chemical extraction and vitrification facilities of the UP3 Treatment Plant at La Hague. Then he successively became Technical Director, Treatment Division Director, Treatment Business Unit Director and in 2003, Senior Executive Vice President of COGEMA, in charge of Treatment, Recycling and Logistics.

Since 2005, Mr. PRADEL is the Director of the Nuclear Energy Division at the French Atomic Energy Commission (CEA), in charge of the whole nuclear energy sector. Mr. PRADEL lives in Versailles with his wife and their three children.

Mr Pradel is Chevalier of the National Order of Merit.



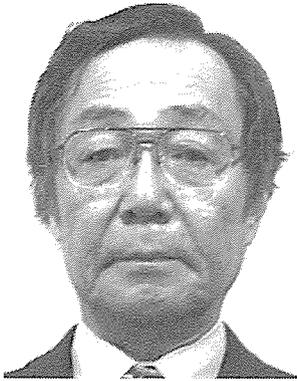
Angelina Howard

Angie Howard is Vice President, Office of the President and Executive Advisor to the President for the Nuclear Energy Institute. Ms. Howard, who joined NEI in 1996, has had previous responsibilities for the organization's communications, external affairs and member relations activities.

Before joining NEI, Ms. Howard was vice president and director of industry relations and information services for the Atlanta-based Institute of Nuclear Power Operations. She also was involved in the formation of the World Association of Nuclear Operators and the development of communications activities for the WANO-Atlanta Center, which is co-located with INPO. Before joining INPO in 1980, Ms. Howard was employed by Duke Power Company from 1969 to 1980.

Ms. Howard received a bachelor's degree from Clemson University, and is a graduate of the Advanced Management Program at the Harvard University Graduate School of Business. She has completed the Reactor Technology Program for Utility Executives sponsored by the Massachusetts Institute of Technology and the National Academy for Nuclear Training. Ms. Howard is an accredited member of the Public Relations Society of America and is a member of the American Nuclear Society. She also is a member of the Clemson University Research Foundation Board.

SESSION 1



Hiroyuki Torii

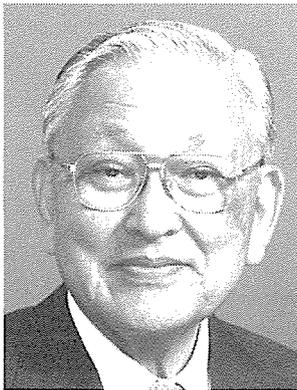
Year of Birth: 1942

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



Yumi Akimoto

Year of birth: 1929

Academic career

1951: Awarded a B.S. in Chemistry from Tokyo Bunrika University (presently Tsukuba University)
1957: Awarded a Doctor's degree in Science
1958 to 1960: Visiting Scholar at the Lawrence Radiation Laboratory (now the Lawrence Berkeley Laboratory) at the University of California at Berkeley

Professional career

1954: Employed by Mitsubishi Metal Corporation (now the Mitsubishi Materials Corp.)
1978: Appointed Director
1981: Appointed Managing Director
1992: Appointed Executive Vice President
1994: Appointed President and CEO
2000: Appointed Chairman
2003: Appointed Director, Executive Advisor
2004: Chief Executive Emeritus

Public offices and other positions

Ministry of Economy, Trade and Industry Chairman, Mining Committee Member, Advisory Committee for Natural Resources and Energy, etc.
Cabinet Office

Councilor, Atomic Energy Commission
Chairman, Industrialist Council for Science and Technology

Awards

October 1997: Received a Blue Ribbon Medal, Japan
November 2003: received Ordre National de la Légion d'Honneur Chevalier, France
Industrial Associations
Chairman, Committee on Energy and Resources, Japan Business Federation
Accounting Director, Japan Association of Corporate Executives
Director, Japan Atomic Industrial Forum, Inc. (JAIF), etc.



Masao Takuma

Year of Birth: 1937

Education:

1961 Graduated from Faculty of Engineering Electrical Engineering Course, the University of Tokyo

Occupation:

1961 Joined Tokyo Electric Power Company
1995 Director, Deputy Executive General Manager, Nuclear Power Division and Engineering Research & Development Division
1997 Director, Deputy Executive General Manager, Nuclear Power Division
1997 Director, Deputy Executive General Manager, Nuclear Power Division and Plant Siting & Environment Division
1998 Standing Auditor
1999 Retired from Tokyo Electric Power Company
1999 Senior Managing Director, Japan Atomic Industrial Forum, Inc.
2000 Executive Managing Director
2001 The AESJ Ethics Committee The vice-chairperson
2003 Atomic Energy Society of Japan Vice President
2004 Atomic Energy Society of Japan President
2004 Executive Vice Chairman Japan Atomic Industrial Forum, Inc.
2005 Retired from President Atomic Energy Society of Japan



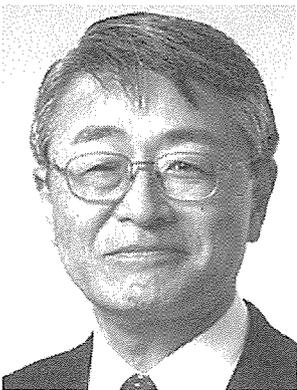
Takahiko Ito

YEAR OF BIRTH 1940
 EDUCATION
 University of Tokyo Tokyo, Japan
 Bachelor of Electronic Engineering '65
 PROFESSIONAL EXPERIENCE
 Chubu Electric Power Co., INC Nagoya, Japan '64 -Present
 Executive Vice President & Director Jul. '05-Present
 Executive Vice President & Director, Division Manager of Power Generation Division '04- '05
 Managing Director, Division Manager of Power Generation Division '03- '04
 Managing Director '01- '03
 Director, General Manager of Hamaoka Central Administration Office '97- '01
 Senior General Manager, General Manager of Hamaoka Nuclear Power Station '93- '97
 Deputy General Manager of Hamaoka Nuclear Power Station '92- '93
 Chairman, Nuclear Development Steering Committee, The Federation of Electric Power Companies of Japan Tokyo, Japan '05-Present



Isami Kojima

Born: 1937
 Graduated: Tohoku University, 1960: the Law Department
 Career Details:
 1960 Joined Tokyo Electric Power Company (TEPCO)
 1985 Head of TEPCO Ohta Office
 1989 Head of TEPCO Inawashiro Power Station
 1992 Head of TEPCO Tama Office
 1993 Associated Director and Head of TEPCO Tama Office
 1994 Associated Director and Head of TEPCO Chiba Office
 1995 Executive Director and Head of TEPCO Chiba Office
 1997 Managing Director and General Manager of Site Environment Department, as well as in charge of Fukushima and Niigata Regions
 1996 Executive Vice President and General Manager of Site Environment Department, as well as in charge of Fukushima and Niigata Regions
 2000 Executive Director of TEPCO; Vice-Chairman of the Federation of Electric Power Companies (FEPC)
 2004 Joined Japan Nuclear Fuel Limited (JNFL) as President



Shozo Saito

Present Position
 Senior Vice President & Executive Officer Hitachi, Ltd.
 Year of Birth 1945
 Education
 1968 Graduated from Nuclear Engineering Dept., Tokyo University
 1970 Graduated from M.S. in Nuclear Engineering Dept., Tokyo University
 Career Record
 1970 Joined Hitachi, Ltd., Hitachi Works First Section, Nuclear Power Plant Engineering Dept.
 1980 Assigned to a Manager of Nuclear Design Dept. of Hitachi Works
 1992 Assigned to a Dept. Manager of Nuclear Design Dept. of Hitachi Works
 1994 Assigned to a Division Manager of Operating Plant Services Div. Nuclear Power Systems Division
 1998 Assigned to a Deputy General Manager of Hitachi Works
 1999 Assigned to a General Manager of Planning & Management Div. of Nuclear Systems Div.
 2001 Assigned to a Managing Officer, General Manager of Nuclear Systems Div.
 2003 Assigned to a Managing Officer, President & Chief Executive Officer, Power & Industrial Systems
 2003-June Assigned to a Vice President & Executive Officer, President & Chief Executive Officer, Power & Industrial Systems
 2004 Vice President & Executive Officer
 2006 Senior Vice President & Executive Officer



Yuichi Tonozuka

Year of Birth : 1937

Title/Position : President, Japan Atomic Energy Agency (JAEA)

Education :

1960 Faculty of Economics, Keio University

Career :

1960 Chubu Electric Power Co.,Inc

1991 Chubu Electric Power Co.,Inc Director,Acting General Manager of Plant Siting and Environmental Affairs Bureau

1995 Managing Director

1997 The Federation Of Electric Power Companies Senior Managing Director Chubu Electric Power Co.,Inc Director (treated as Managing Director)

1999 The Federation Of Electric Power Companies Senior Managing Director Chubu Electric Power Co.,Inc Director (treated as Vice President)

2001 Eiraku Auto Service Co.,Ltd President and Director Chubu Electric Power Co.,Inc Advisor

2003 Japan Nuclear Cycle Development Institute (JNC) Executive Vice President

2004 Japan Nuclear Cycle Development Institute (JNC) President

2005 Japan Atomic Energy Agency (JAEA) President

SESSION 2



Mitsuo Arai

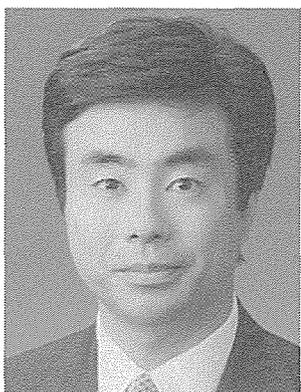
Year of Birth: 1943

Education

- 1967 Graduated from Tokyo University, Department of Literature Occupational Career:
- 1967 Joined The Yomiuri Shimbun On duty at the Akita branch office
- 1973 Department of Economics, Editorial Office, Tokyo Headquarters, in charge of energy & finance (Bank of Japan)
- 1982 Correspondent in Brussels, Department of International Affairs
- 1986 Deputy Director, Department of Economics, Editorial Office
- 1990 Deputy Director, Department of Descriptions, Editorial Office
- 1997 Manager, Newspaper Audit Board
- 2002 Editor
- 2003 Retired from The Yomiuri Shimbun

Present: Journalist

Special Researcher, the Japan Electric Power Information Center (JEPIC)
Director, Global Industrial and Social Progress Research Institute (GISPRI)
Member of a Special Committee, the Atomic Energy Commission (AEC)
Member of the Advisory Committee for Resource and Energy (METI)
Lecturer, Taisho University
Lecturer, Graduate school of the Tokyo Keizai University



Tadao Yanase

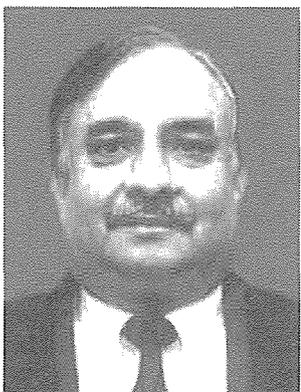
Year of Birth: 1961

Education:

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

Career Experiences:

- 2004~ Director, Nuclear energy Policy, METI (Ministry of Economy, Trade and Industry)
 - 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 representative of MITI (now renamed METI) in USA
 - 1998~1999 Chairman of MITI's junior board meeting
 - 1996~1999 Placed the direction and priorities of the whole MITI's policies at Minister's secretariat.
 - 1994~1996 Played a key role at the US-Japan Auto Talks.
 - 1992~1994 Negotiator for textile in establishing WTO ("GATT Uruguay Round")
 - 1984 Joined MITI (Ministry of International Trade and Industry)
-



Shreyans Kumar Jain

Chairman & Managing Director
Nuclear Power Corporation of India Limited

- 1948 Born
 - 1969 Graduation in Mechanical Engineering
 - 1970 Joined the erstwhile Power Projects Engineering Division (PPED) of Nuclear Power Corporation of India Limited (NPCIL) after one-year training at the Bhabha Atomic Research Centre (BARC)
 - 1971 Design Team of AECL, Canada at the Rajasthan Atomic Power Station
 - 1974 Field Engineering team, Rajasthan Atomic Power Station
 - 1983 Head of Field Engineering team, Narora Atomic Power Station (NAPS), NPCIL
 - 1989 NPCIL headquarters, Mumbai
 - 1995 Technical Advisor, office of CMD, NPCIL
 - 2000 Director (KK-LWR)
 - 2002 Executive Director (LWR)
 - 2004 Chairman & Managing Director of NPCIL and BHAVINI
-



Ron Gorham

Ron Gorham is Head of Competition for the NDA with a key responsibility for all aspects of the Tier 1 competitions from inception to final award and transition. He brings to the post over 20 years experience in contracting and public sector procurement within the nuclear field the last 10 years of which was specialising in creating a genuinely competitive decommissioning market. He has also worked extensively with the UK Regulators on a wide range of activities from property matters, through sales and acquisitions to a potential nuclear Private Finance Initiative. This has given him valuable knowledge of working within the UK's tightly regulated environment. Ron is also a high risk reviewer for the UK's Office Of Government and Commerce which allows him to stay abreast of developments in other markets.

SESSION 3



Masao Nakamura

Year of Birth: 1933

Education:

1955 Kyushu Institute of Technology

Occupational Career:

1955~ 1959 Engineer, the Tokyo Metropolitan Government

1959~ Joined The Yomiuri Shimbun

1983~1996 Editorial Writer, The Yomiuri Shimbun

1996~2005 Research Advisor of Central Research Institute of Electric Power Industry (Member, Transport Technology Council), (Member, Transport Technology Council)

2003~ Tokyo Institute of Technology part-time instructor

2005~ Research Advisor Emeritus

Publications:

1976 Meteorological Resources, Kodansha, Tokyo

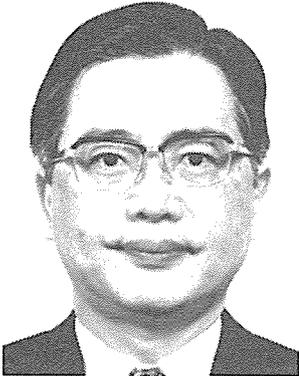
1982 Meteorological Economics, PHP Institute, Tokyo

1985 People and Technology that support Japan co-author, Bungei Shunjusha Tokyo

1987 Columbus's Egg, Kodansha, Tokyo

2004 Nuclear Power and Media

2006 Nuclear Power and Environment



Kiyoto Aizawa

Year of Birth: 1945

Academic Career:

Graduate from Department of Nuclear Engineering, Faculty of Engineering, University of Tokyo

Graduate for Master of Nuclear Engineering Degree, Department of Nuclear Engineering, Faculty of Engineering, University of Tokyo

Graduate for Doctor's Degree of Nuclear Engineering, Department of Nuclear Engineering, Faculty of Engineering, University of Tokyo

Professional Career:

1973 Entered the Power Reactor and Nuclear Fuel Development Corporation (PNC)

1992 Visiting Professor, Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology

1993 Director, Safety Engineering Division, O-arai Engineering Center, PNC

1995 Director, Advanced Technology Division, O-arai Engineering Center, PNC

1996 Deputy Senior Director, Reactor Development Project, PNC

1998 Executive Director, the Japan Nuclear Cycle Development Institute (JNC)

2003 Senior Technical Advisor, JNC

2004 Vice President, the Atomic Energy Society of Japan (AESJ)

2005 Senior Executive Advisor, the Japan Atomic Energy Agency (JAEA)



Michio Ishikawa

Year of Birth : 1934

Career :

2005 ~ Present President, Japan Nuclear Technology Institute (JANTI)

2003 ~

1997 ~

2003 Adviser Nuclear Power Engineering Corporation (NUPEC)

1991 ~

1997 Professor, Faculty of Engineering, Hokkaido University

1989 ~

1991 Vice President, Tokai Research Establishment, Japan Atomic Energy Research Institute (JAERI)

1985 ~

1983 Director, JPDR Division, JAERI

1983 ~

1985 Director, Atomic Safety Analysis Division, JAERI

1974 ~

1983 Principal Researcher, JAERI

1956 Graduated Department of Mechanical Engineering Faculty of Engineering, the University of Tokyo



Naoto Sekimura

Year of Birth: 1958

Educational Background:

1981 Department of Nuclear Engineering, Faculty of Engineering, The University of Tokyo
1986 Department of Nuclear Engineering, Graduate School of Engineering, The University of Tokyo, Ph.D.

Employment Record:

1985 Research Fellow, Japan Society for the Promotion of Science
1987 Lecturer, Department of Nuclear Engineering, Faculty of Engineering, The University of Tokyo
1989 Associate Professor, Engineering Research Institute, Faculty of Engineering, The University of Tokyo
1990 Associate Professor, Nuclear Engineering Research Laboratory, Faculty of Engineering, The University of Tokyo
1994 Associate Professor, Department of Quantum Engineering and Systems Science, Faculty of Engineering, The University of Tokyo
2000 Professor, Department of Quantum Engineering and Systems Science, School of Engineering, The University of Tokyo



Ichiro Takekuro

Year of Birth: 1946

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

Present Position: Managing Director 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
2005 Managing Director Chief Nuclear Officer



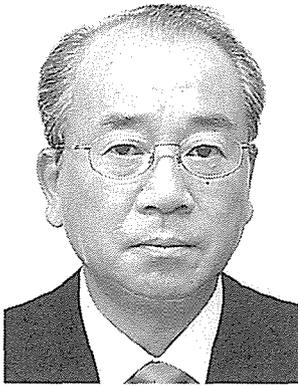
Kenkichi Hirose

Mr. Hirose was appointed Director General of the Nuclear and Industrial Safety Agency of Japan in September 2005. The Director General is the principle executive officer of NISA. Mr. Hirose has been an advocate of a focus nuclear safety regulation in such matters as new power reactor licensing and nuclear fuel transport and storage. The range of his expertise also extends to international energy relations as he has served as First Secretary of Embassy of Japan in Australia and in other relevant directorships. Before his appointment, he was a board member of the National Institute for Materials Science, Secretary General of the Secretariat for the Nuclear Safety Commission, and Deputy Director General for Nuclear Power at NISA for one and a half years from January 2001 when the agency was newly established.

Work Experience:

1974 Joined the Prime Minister's Office, Science and Technology Agency (STA)
1985 First Secretary of Embassy of Japan in Australia
1994 Director of Fuel Transport and Storage Regulation Division, Nuclear Safety Bureau, STA
1998 Director of Nuclear Safety Division, Nuclear Safety Bureau, STA
2000 Director of Planning Group, The National Institute of Physical and Chemical research
2001 Deputy Director-General for Nuclear Power, NISA, METI
2002 Deputy Director-General of Science and Technology Policy Bureau, Ministry of Education, Culture, Sports Science and Technology (MEXT)
2003 Secretary General of the Secretariat Nuclear Safety Commission
2004 Board member of the National Institute for Materials Science
2005 Director-General, NISA, METI

SESSION 4



Norihisa Ito

Year of Birth: 1948
Graduated from Doshisha University, Faculty of Economics

Career Details:

1970 Joined Chubu Electric Power Co, Inc (CEPCO)
1989 Manager, Sales Dept. (CEPCO)
1991 Manager, Plant Siting Dept. (CEPCO)
1993 Deputy General Manager, Plant Siting & Environment Affairs Division (CEPCO)
1995 General Manager, Customer Service & Sales Dept. (CEPCO)
1997 General Manager of Sales Planning Group, Customer Service & Sales Dept. (CEPCO)
1999 Senior General Manager of Okazaki Regional Office (CEPCO)
2001 Director & General Manager of Customer Service & Sales Dept. (CEPCO)
2004 Director (CEPCO); Senior Managing Director of the Federation of Electric Power Companies (FEPCO)



Noriko Ishioka

Assistant Principal Researcher
Plant Positron Imaging Group, Radiation-Applied Biology Division, Quantum Beam Science Directorate, Takasaki, Japan Atomic Energy Agency

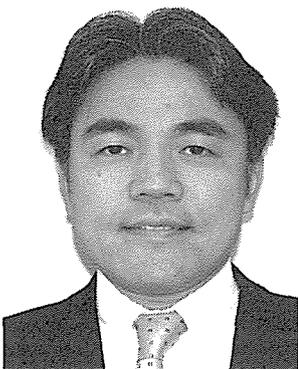
Year of Birth: 1967

Education:

1991 B.HSc., School of Hygienic Sciences, Kitasato University
2004 Ph.D. in Engineering, Energy Engineering and Science, Graduate School of Engineering, Nagoya University

Employment:

1991 Scientist, Japan Atomic Energy Research Institute



Noriyuki Kato

Associate Professor
Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology

Year of Birth: 1962

Education:

1985 B. Sc. at the Department of Chemical Engineering, Tokyo University of Agriculture and Technology
1991 Dr. of Engineering at the Department of Chemical Engineering, Tokyo Institute of Technology

Occupational Carrier:

1991 Assistant Professor at the Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology
1997-1998 Research Fellow at the Centre for Study of Environmental Change and Sustainability at the University of Edinburgh, UK
2002 Associate Professor at the Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology



Takaaki Kotani

Year of Birth : 1935 (Oarai Town, Ibaraki Prefecture)
Education : Graduated from Nakaminato-Daiichi high school
Occupational Career:
1958 Joined Oarai town office, Town assembly secretariat service office
1968 Financial chief, Administration division
1974 Chief, Planning office
1988 Assistant official, Oarai town
1996 Mayor, Oarai town (The 3rd term)
Present: Main public office
Union president, Oarai, Asahi, and Mito environmental hygiene associations
President, Oarai terminal incorporated company
Chairman of the board, Ibaraki cities, towns and villages personnel mutual aid society
Committee, Ibaraki Area Fishery Adjustment Committee
Director, Ibaraki synthesis medical checkup association
Director (vice president), The Ibaraki atomic power conference
Committee, Ibaraki atomic power council
Committee, Ibaraki Mito medical care welfare conference
Committee (vice president), Ibaraki Tokai area environmental radiation oversight commission
Committee, Cities, towns and villages personnel mutual aid society administrative review
Standing director, Cities, towns and villages fisheries promotion measure conference



Harukuni Tanaka

Date of Birth; 1953
Education;
1972-1976 Faculty of Engineering, The University of Tokyo Awarded the degree of BE in Nuclear Engineering
Occupational Career;
1976 Employed by the Tokyo Electric Power Company (TEPCO)
1986 Manager, In-core fuel management, Toden Software Co.(TSI), a subsidiary of TEPCO
1991 Licensed Chief Nuclear Reactor Engineer and Manager of Engineering Section, Fukushima-Daini NPS, TEPCO
1993 Deputy General Manager, Nuclear Power Division, Federation of Electric Power Companies of Japan (FEPC)
1995 Manager of Nuclear Power Programs Section, Nuclear Power Plant Construction Dept., HQ, TEPCO
1997 Licensed Chief Nuclear Reactor Engineer and General Manager of Engineering Dept., Fukushima-Daiichi NPS, TEPCO
2000 Deputy General Manager, Nuclear Engineering Dept., HQ, TEPCO
2001 Deputy General Manager, Nuclear Programs Dept., HQ, TEPCO
2004 General Manager, Nuclear Power Dept., FEPC



Tomohiko Kita

Education:
1978 -
1982: International Christian University (ICU), Mitaka, Tokyo (B.A. in Liberal Art, Physics, Literature)
1986 -
1987: Center for International Studies, Ohio University, Athens, Ohio, United States (M.A. in International Affairs - International Administrative Studies)
Professional Experiences:
1982 -
1986: staff writer, Atomic Industrial Journal, Japan Atomic Industrial Forum, Inc. (JAIF)
1988: Research and International Affairs Division, Nuclear Energy Bureau, Science and Technology Agency, Prime Minister's Office
1993 -2000: Programme Management Officer, Department of Technical Co-operation, International Atomic Energy Agency (IAEA)
2000 -2002: Group Leader, International Cooperation Group, Department of Policy and Planning, Japan Atomic Industrial Forum (JAIF)
2002 -2005: Chief Editor and Group Leader, Atomic Industrial Journal, Department of Information and Research, JAIF
2006 : General Manager, Department of Information and Communication, JAIF

STATEMENT



Nobuo Ishizuka

YEAR OF BIRTH: 1944

AFFILIATION:

Senior Managing Director, Secretary General
Japan Atomic Industrial Forum, Inc.

EDUCATION:

1965-1968 Law Department, Waseda University, Japan

PROFESSIONAL CARRIER:

1968 Joined Japan Atomic Industrial Forum, Inc. (JAIF)

1992-1995 General Manager

Department of Development Policy Promotion, JAIF

1995-1998 General Manager

Department of Planning & Information Services, JAIF

1998-2000 Deputy Secretary General

2000- Secretary General

Member of the Board

2004- Senior Managing Director

Secretary General

2006- Senior Managing Director

MEMBERSHIP IN PROFESSIONAL SOCIETIES

● Institute of Nuclear Materials Management

● International Association for Energy Economics



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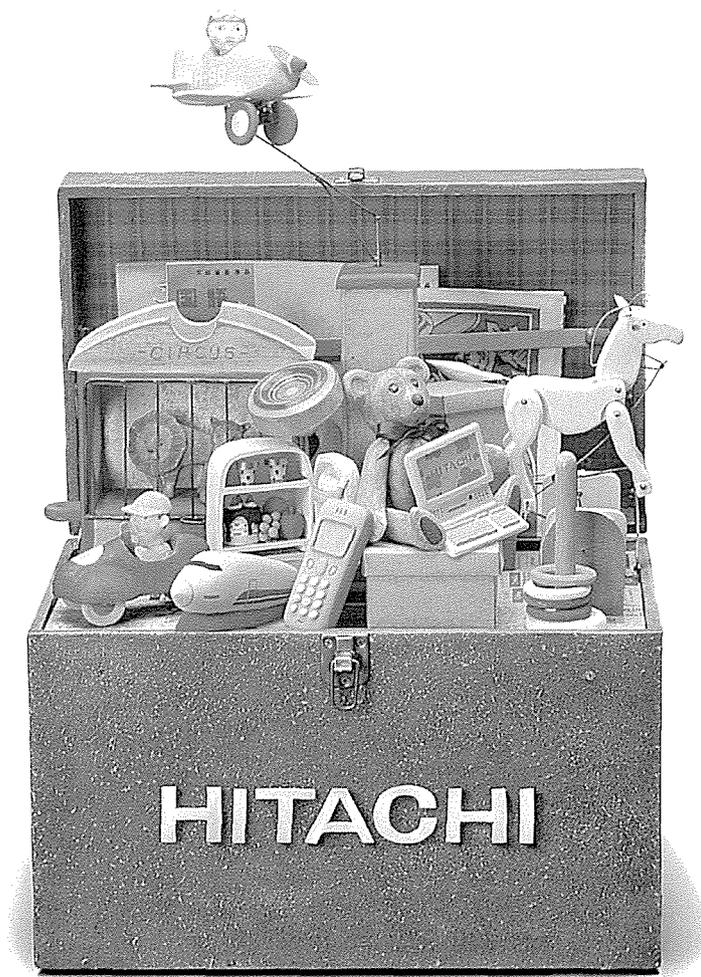
"Atoms In Japan" is the only English publication to introduce the current state of Japanese nuclear energy development to interested parties overseas.

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Department of Information & Communication
E-mail: aij@jaif.or.jp

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