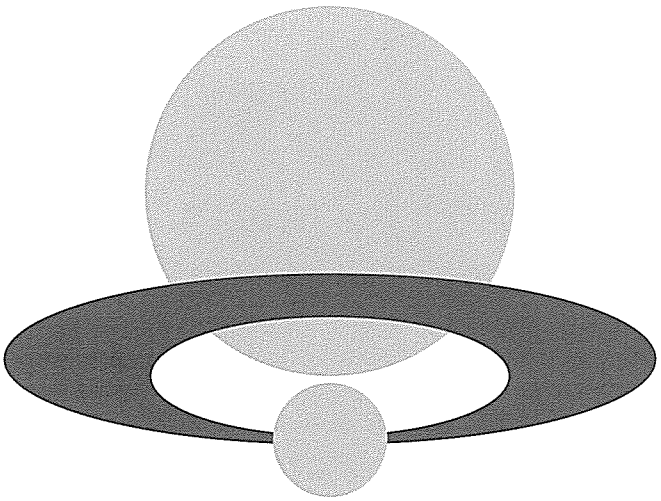
The 33rd JAIF ANNUAL CONFERENCE

ABSTRACTS



April 26&27, 2000
Tokyo International Forum

April 28, 2000
Tokai Culture Center

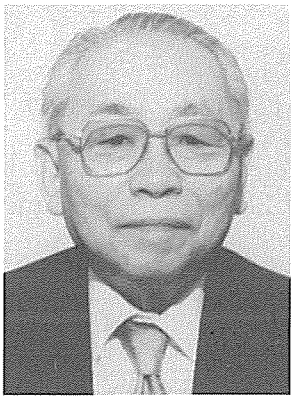
JAPAN ATOMIC INDUSTRIAL FORUM, INC.

SHOULD WE CONTINUE TO MINE ?

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

ENERGY CREATED BY TECHNOLOGY
MITSUBISHI PWR NUCLEAR POWER PLANT

MITSUBISHI HEAVY INDUSTRIES, LTD.
Nuclear Energy Systems Headquarters:
5-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8315, Japan Phone : (03)3212-3111 Facsimile : (03)3212-9882



Takashi Mukaibo
JAIF Chairman

Akio Morishima
Chairman of the
Program Committee

The 33rd JAIF Annual Conference

Main Theme: "Regaining Trust in Nuclear Energy — Now and the Future"

The world nuclear industry has been undergoing a great dynamism in recent years. Nuclear energy is appreciated with its clean electricity generation in light of a global warming solution, while civilian reactors can contribute to the disposition of excess fissile materials from dismantled nuclear weapons. Meantime, growing concerns over safety, radioactive waste disposal and economy in competitive energy market are the main challenges to the nuclear future. In Japan, the recent events as highlighted in the JCO criticality accident and MOX falsification have damaged to a great extent the public acceptance of nuclear energy. In Europe, the left wing governments under environmentalists influence undergo the decision to phase out the existing unclear power plants. There are both technical and political questions to overcome for nuclear energy to have its full-fledged role effective.

The JAIF Annual Conference provides a platform where specialists of various fields exchange views and ideas on those issues related to nuclear energy. Its aim is to serve to global energy security with respect to sustainable development.

THE 33rd JAIF ANNUAL CONFERENCE

April 26&27, 2000 at Hall C, Tokyo International Forum
April 28, 2000 at Tokai Culture Center

Main Theme: "Regaining Trust in Nuclear Energy — Now and the Future"

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Restructuring Nuclear Power Industry in the Competitive Market

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Program of the 33rd JAIF Annual Conference

Main Theme: "Regaining Trust in Nuclear Energy — Now and the Future"

WEDNESDAY, APRIL 26

Opening Session (9:30-10:30)

Chairman: Jiro Kondo
Vice Chairman, Japan Atomic Industrial Forum

JAIF Chairman's Address
Takashi Mukaibo
Chairman
Japan Atomic Industrial Forum

Remarks by Chairman of Atomic Energy Commission of Japan
Hirofumi Nakasone
Chairman of Atomic Energy Commission of Japan;
Minister of State for Science and Technology

Remarks by Chairman of the Conference Program Committee
Akio Morishima
Chair of the Board of Directors
Institute for Global Environmental Strategies

Session 1 (10:30-12:00, 13:30-17:00)

Chairman: Soichi Iijima
Vice Chairman, Japan Atomic Industrial Forum

Lectures:

"Securing Our Global Energy Future"
Joe F. Colvin
President and CEO
Nuclear Energy Institute, U.S.A

"Current State and Future Development of Nuclear Power Energy in France"
Pascal Colombani
Administrator General
CEA, France

"Tokyo's Future and Suggestion on Energy Policy"
Shintaro Ishihara
Governor of Tokyo

Lunch Break (12:00-13:30)

Lectures:
Chairman: Yasushi Matsuda
President, Nuclear Power Engineering Corporation

"South Pacific Forum's Message on Environment Preservation and Energy for the 21st Century"
H.E. Kuniwo Nakamura
President of the Republic of Palau

"Prospect of Russia's Nuclear Power Development for the Future"
Evgeny O. Adamov
Minister of the Russian Federation for Atomic Energy, Russia

"The Prospects of Korea's Nuclear Power Development for the Future"
Yong-Taek Park
Executive Vice President
Korea Electric Power Corporation, Korea

Chairman: Taizo Nishimuro
President, Toshiba Corporation

"Nuclear Safety Assurance in a Globally Changing Environment"
Richard A. Meserve
Chairman
United States Nuclear Regulatory Commission, U.S.A

"Nuclear Power Development in China and China National Nuclear Corporation"
Li Zhongliang
Vice President
China National Nuclear Corporation, China

JAIF Chairman's Reception (17:30-19:00)
At Hall B, B Block, Tokyo International Forum

THURSDAY, APRIL 27

Session 2 (9:00-12:00)
"Restructuring Nuclear Power Industry in the Competitive Market"

Chairman:
Hiroyuki Torii
Editorial Writer, The Nikkei Newspaper

Panelists:
Bodo Kalthoff
Vice President of Sales, Nuclear Power Generation
Siemens/KWU, Germany

Takashi Kawamura
Executive Vice President and Director
Hitachi, Ltd.

Chris Loughlin
Director
BNFL, U.K.

Steve R. Specker
President
General Electric Nuclear Energy, U.S.A.

COGEMA, France

Discussion with the floor

LUNCHEON 12:15-14:15
At Reception Hall, B Block, Tokyo International Forum

M.C.: Shoichiro Kobayashi
Vice Chairman, Japan Atomic Industrial Forum

Remarks by Minister of International Trade and Industry
Takashi Fukaya
Minister of International Trade and Industry

Special Lecture:
"Future of Japan and the World"
Tsuyoshi Mori
Professor Emeritus, Kyoto University

FILMS 13:15-14:15
At Hall C, Tokyo International Forum

Latest films on Japan's nuclear energy research and development activities will be presented for those who will not be attending the Luncheon.

Session 3 (14:30-17:30)
"How to Formulate Energy Policy for the Future?"

Chairman:

Soichiro Tahara
Journalist

Keynote Speech:
"Prospect of Japan's Energy Policy for the Future"

Yoichi Kaya
Professor Emeritus, University of Tokyo
Chairman, MITI Committee on Energy

Panelists:

Yukio Edano
Member of the House of Representatives
Democratic Party of Japan

Akinori Eto
Member of the House of Representatives
Liberal Democratic Party

Yutaka Fukushima
Member of the House of Representatives
Komei Party

Kimie Hatano
Member of the House of Councilors
Japan Communist Party

Yasufumi Tanahashi
Member of the House of Representatives
Liberal Democratic Party

Kiyomi Tsujimoto
Member of the House of Representatives
Social Democratic Party

Discussion with the floor

FRIDAY, APRIL 28

Symposium in Tokaimura (11:00-12:30, 14:00-16:30)
At Tokai Culture Center, Tokaimura

"After the JCO Accident—Outlook for the Future of Tokaimura"

Chairman: Akio Morishima
Chair of the Board of Directors
Institute for Global Environmental Strategies

Presentations on lessons learnt from the criticality accident: (11:00-12:30)
"Recovery and Restart from the Accident"
Tatsuya Murakami
Mayor of Tokaimura

Naotaka Oki
Director-General, Atomic Energy Bureau
Science and Technology Agency

Nobuya Minami
President
Tokyo Electric Power Co.

"Lessons Learned from the JCO Accident and Our Task for the Future"
Yumi Akimoto
President and CEO
Mitsubishi Materials Corp.

LUNCH (12:30-14:00)
At JA Tokai Hall
(Symposium attendants are invited to Lunch.)

Panel discussion (14:00-16:30)
Panelists:
Gerald Clark
Secretary General
The Uranium Institute

Fumiaki Isaka
Deputy Head, Youth Division
Tokaimura Chamber of Commerce and Industry

Yasuhiro Koizumi
Manager, Department of Environment
Rokkashomura, Aomori Prefecture

Shunsuke Kondo
Professor, Dept. of Quantum Engineering and Systems Science
University of Tokyo

Akiko Kubodera
Professor, Faculty of Pharmaceutical Sciences
Science University of Tokyo

Shinzo Saito
Executive Vice President
Japan Atomic Energy Research Institute

Kenji Sumita
Professor Emeritus
Osaka University

Katsuhiro Terunuma
Farming resident in Tokaimura

Yasumasa Togo
President
Japan Nuclear Cycle Development Corporation

Discussion with the floor

WEDNESDAY, APRIL 26

OPENING SESSION (9:30 – 10:30)

- Opening Remarks

〔MEMO〕

〔MEMO〕

WEDNESDAY, APRIL 26

SESSION 1 (10:30-12:00, 13:30-17:00)

This session will invite guest speakers to address prospect for the 21st century from the viewpoints of energy security, environment, and nuclear power development.

- Lectures

SECURING OUR GLOBAL ENERGY FUTURE

JOE F. COLVIN
PRESIDENT AND CHIEF EXECUTIVE OFFICER
NUCLEAR ENERGY INSTITUTE

TOKYO, JAPAN
APRIL 26, 2000

Energy—especially in the form of electricity—is a major part of daily life throughout the world's developed countries. Energy is growing in importance in the less developed countries, too, as they work to improve the quality of life for their citizens.

At the same time, nations around the world must balance the needs of economic growth and development with careful stewardship of the environment. How can we provide the energy needed to support continued economic growth, while at the same time protecting the environment? We can do this by using Earth's energy resources wisely—including nuclear energy, one of only two major energy sources[1] that can produce large amounts of electricity without polluting the air.

A diverse energy mix is the key to global energy security for the future. Nations that have nuclear energy programs—including Japan and the United States—must continue to maintain and further develop this vital energy source.

Consider the U.S. example:

The United States has 103 operating nuclear power units, which produce nearly 20 percent of our electricity. Because these plants produce no carbon dioxide or other greenhouse gases, U.S. air emissions are much lower than they otherwise would be. If utilities had not invested in nuclear power plants in the 1970s, we would be burning even more coal than we do now—and our struggle with air pollution would be that much worse.

U.S. policymakers and the public are increasingly aware that our nation must continue to rely on nuclear energy for part of its electricity. We must maintain, or even increase, the portion of electricity produced by this source.

The United States is among those nations that are liberalizing their electricity markets. This development is serving to highlight the many benefits of nuclear energy.

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[1] Hydroelectric power is the other major source.

Competition is good for the nuclear energy industry. First of all, it is focusing corporate and political attention on the strategic importance of this nuclear energy source. It also is acting as a powerful stimulus for industry consolidation and the economies of scale this can achieve.

Second, liberalization and the industry's outstanding safety record have helped to increase the pace of regulatory reform. The U.S. Nuclear Regulatory Commission (NRC) has developed an objective, safety-focused new oversight process for nuclear power plants.

And third, changes in the electricity marketplace are drawing attention to the environmental benefits of nuclear energy. Policymakers now recognize that nuclear energy is vital to America's environmental future.

The U.S. nuclear energy industry had an outstanding year in 1999, and we expect another great year in 2000. To highlight how positive the outlook is, the NRC is preparing to handle a large volume of license renewal applications over the next several years. The strong interest in license renewal shows how committed we are to maintaining our nuclear generating capacity and—when new capacity is needed—building additional nuclear power plants.

Our nation needs nuclear energy. NEI continues to serve a leadership role in advancing this vital resource.

Current state and future development of nuclear power energy in France

P.COLOMBANI, Administrator General, CEA

(Abstract of the presentation)

Today nuclear energy which plays an important role in the world-wide energy supply is essential for the economy of Japan and France. However Nuclear electricity generation is facing new challenges. The purpose of this presentation is to introduce the new orientations of CEA in the field of R&D so as to promote this source of Energy for the future.

I) The Nuclear Energy background

1 - The nuclear industry is subject to growing and strong requirements, in terms of competitiveness, safety and reduction of the impact on the environment

2 - But the nuclear electricity have major advantages

- *Its industrial maturity guaranties an essential background for future developments*
- *The growing lifetime of the plants makes them economically suitable*
- *It participates in reducing the CO2 emission in respect with the engagements taken in Kyoto.*
- *It is a fundamental factor of equilibrium in the world energy market as the dependence of United States and European Union on oil providers will certainly grow at short term.*

3 - The concept of energy independence based on securing resources is now changing. Nowadays, energy supply independence is discussed in term of competitiveness and environmental impact on a world wild scale.

4 - To face the liberalisation of the electricity market, the nuclear industry has started restructuring.

II) The French energy policy

1 - The nuclear electricity production program is a success:

63 GWe providing at least 75% of the French electricity in good safety condition and at one of the lowest price in Europe with many advantages:

- *energetic independence : from 20% in the early 70's, it's now close to 50%*
- *employment : around 130 000 persons work in nuclear industry*
- *exportation balance : the importation of fossil fuel decreased and the nuclear industry is exporting (electricity, products, services, ...)*
- *protection of the environment by reducing the emission of gases (SO2, NO2, CO2)*

2 - New objectives

- *The fuel cycle back-end*
- *Transparency*
- *Control of CO2 emission*

III) R&D future objectives at CEA

The French government recently confirmed the development of nuclear option for the next ten years.

1 - Short-term objectives

- *Improve competitiveness and safety of the nuclear power plants and fuel cycle facilities while reducing its impact to the environment.*
- *Ease the decision of the Parliament and the government in 2006 as regards the long-term storage of long life and High level wastes on the basis of the results of the research conducted with three axes defined in the 91' law (separation and transmutation; deep underground reversible or not reversible disposal; and a conditioning process and long term storage at ground level).*
- *Prepare the renewal of the nuclear power plants*
- *Intensify researches in the fields of radiobiology and toxicology*
- *Estimate the industrial and economical feasibility of the Laser enrichment technology*

2 - Preparing the future

The reactor of the future should:

- *Save natural resources*
- *Minimise the volume of long life radioactive wastes*

The reactor of the future will be omnivorous with a low consumption. R&D which is opened to world-wide cooperation is actually conducted on various kind of reactors (various neutron speeds, coolants, ...).

Keypoints

The safety is a key point for CEA and the other actors of the nuclear. The safety has to be built collectively.

The transparency that has to be absolute with our partners, in and out of crisis.

Many technical challenges are still to be taken up in the nuclear field. And for a majority of those, CEA has to strength its international links and cooperation.

The success will come from the ability of the nuclear community to federate on the research fields that have common technical and political stakes.

Tokyo's Future and Suggestion on Energy Policy

Shintaro Ishihara
Governor of Tokyo

South Pacific Forum's Message on Environment Preservation and Energy for the 21st Century

H.E. Kuniwo Nakamura
President of the Republic of Palau

Prospect of Russia's Nuclear Power Development for the Future

Evgeny O. Adamov
Minister of the Russian Federation for Atomic Energy

The Prospects of Korea's Nuclear Power Development for the Future

Yong-Taek Park
Executive Vice President, Korea Electric Power Corporation

Nuclear generation has contributed to not only a stable supply of electricity worldwide, but also environmental conservation by greatly decreasing the greenhouse gas emission.

Korea, depending on the import of 97% of its total energy demand has extended its nuclear development as an alternative reliable energy source. According to the 5th national long-term power development plan settled last year, the nuclear facility capacity will reach approximately 26,000MW in 2015. The nuclear power plants to be built will be mainly KSNP and KNGR.

KEPCO plans to build a full scale commercial vitrification plant to reduce volume of LILW. The disposal facility for the LILW is expected to start operation in 2008.

And KEPCO finally signed as the prime contractor of the North Korea LWR project by KEDO. KEDO project opens a new chapter in South-North cooperation, peaceful coexistence and economic exchange.

With the advent of new millennium, we expect our nuclear industry to face more competition and deregulation as a result of restructuring as well as limited global resources and environmental challenges.

Our future challenge is to achieve better nuclear performance through improved safety and economic efficiency in order to accomplish nuclear competitiveness and public acceptance.

Nuclear Safety Assurance in a Globally Changing Environment

Richard A. Meserve
Chairman
U.S. Nuclear Regulatory Commission

This is a time of increasing awareness of, and concern about, the world's environment. Global warming and greenhouse gas production are prominent issues, and energy technologies that do not contribute to these impacts are seen as essential. Nuclear power contributes to the energy supply in over 30 countries, producing about one-sixth of the world's electricity; in some nations, it provides more than 70% of electricity production. Construction of new nuclear capacity is in progress or is being considered in several nations, particularly in Asia and Eastern Europe. In the industrialized countries of Western Europe and in the U.S., new nuclear construction has slowed or stopped, although in the U.S., we have begun to renew plant licenses to permit operation beyond their original 40-year lifetime. However, the industry faces new challenges, as electricity production and distribution are deregulated and become subject to the pressures of competitive markets. These developments suggest that significant changes and challenges will be forthcoming for the nuclear industry and for government agencies, such as the U.S. NRC, that regulate and oversee it.

The NRC's legal mandate is to protect the health and safety of the public. The basis of our philosophy in carrying out this mandate is that plant operators–our licensees–are responsible for safe operation of their plants. The NRC establishes a regulatory framework, verifies through inspections and other means of review that the framework is followed, sees that problems that arise are identified, corrected, and kept from recurring, and in those instances in which serious violations of our regulations occur, takes enforcement action to encourage licensees to focus on significant problems. We have adopted four overall objectives for our regulatory program: to

maintain safety, increase effectiveness and efficiency, reduce unnecessary regulatory burden, and increase public confidence.

While the NRC's basic philosophy has not changed, we are changing the ways in which we undertake our mission. We believe that quantitative, probabilistic safety assessment techniques are sufficiently mature to allow "risk-informing" our regulations. This means that risk insights will be considered, along with more traditional deterministic assessments, in evaluating licensee performance and proposed actions. Moreover, where possible, we are changing our prescriptive regulations to be more performance-based, so that licensees are given more latitude in how they meet regulatory requirements.

Another important element of our approach to regulation has been to expand and improve our public communication. We believe that our regulatory actions must both be fair and be perceived as fair, and that a key to achieving fairness is to be open and accessible. We have established a website on the Internet through which the public may get information about our activities, and we have increased our interactions with our "stakeholders"–those with an interest in the NRC's activities–through public meetings and workshops.

Nuclear power development and regulation are primarily domestic issues, but there is a vital need for international cooperation to ensure that safety is *the* fundamental consideration in its use. For countries with mature nuclear programs, exchanging information on operating experiences helps to promote good safety practices and discourage poor ones; cooperative research provides valuable information on emerging safety issues. For countries with small programs, or those considering acquiring nuclear plants, international cooperation can help

develop the infrastructure and strong safety culture that are essential to assuring safe plant operation. Exchanges can be bilateral or multilateral; through international organizations like the IAEA and NEA, which focus on governmental agencies; or through industry-based groups such as WANO. The U.S. NRC is committed to playing a leading role in international cooperative exchanges, and we consider them an indispensable element in fostering and assuring the safety of nuclear power, now and in the future.

Nuclear Power Development in China and China National Nuclear Corporation

LI Zhongliang
Vice President, China National Nuclear Corporation

I. The Necessity for China to Continue the Development of Nuclear Power

II. The Status Quo of Nuclear Power Development in China
1. NPPs in Operation (Qinshan NPP and Daya Bay NPP)
2. Four NPPs under construction

III. CNNC's Princpal Attitude and Thinking to the Nuclear Power Development
1. Adopting the approach of localization and standardization
2. Making full use of the existing technical basis in China
3. Adopting advanced and mature nuclear power technology (Fast reactor and High-temperature gas-cooled reactor)
4. Mainly relying on our own while pursuing Sino-foreign co-operation

〔MEMO〕

〔MEMO〕

THURSDAY, APRIL 27

SESSION 2 (9:00-12:00)

"Restructuring Nuclear Power Industry in the Competitive Market"

Owing to severe competition in the field of electricity supply in the countries of the West, the nuclear power industry is undergoing a broad process of reorganization and affiliation that transcends national borders. The concentration of capital and the tie-ups across various territories is starting to yield enhanced business performance, and these companies involved are expected to play an important role in future development. This session features speakers representing the companies most active in the reorganization of nuclear power industry. They will exchange opinions about the outlook for nuclear power development worldwide, as well as their individual companies' strategies.

- Panel Discussion
- Discussion with the floor

Continuing Reorganization of Nuclear Power Industry Outside of Japan: Europe

Bodo Kalthoff

Vice President of Sales, Nuclear Power Generation, Siemens/KWU

Nuclear Energy meets about 35 % of the European Union's electricity demand, which increased by an average of 3 % last year.

This not only represents more than a third of the energy mix in Europe's electricity production, it also reduces the emission of CO_2 by 800 million tons annually, reducing the dependency on fossil fuel and consequently reducing energy imports. Nuclear Power supports Europe's economic growth and it's Kyoto commitment to reduce emission levels of CO_2 by 8 % between 2008-2012 from the 1990 levels.

In addition to the recognized high safety standards of the European Community's nuclear reactors, their clean and safe electricity generation, the availability factor is a crucial point for competitivity in a liberalized electricity market. Nuclear Power is competitive with gas, oil, coal and also the so-called regenerative energy sources i.e. solar, wind, etc.

Vital factors supporting Nuclear's competitive role in the European energy mix are safety, availability, low operational and fuel costs.

The utilities still see room for improvements in efficiency of operation, maintenance and modernisation, without compromising on safety.

Besides their own restructuring efforts, utilities rely on the highly developed European Nuclear Industry. Framatome and Siemens have decided to merge all their nuclear activities in a new jointly owned company, thus offering customers worldwide high technical quality and competitive solutions.

Siemens with it's background as turn-key reactor supplier, has the expertise to offer comprehensive and customer tailored solutions for the maintenance, modernization and fuelling of both Boiling and Pressurized Light Water Reactors.

Framatome enjoys the experience from the biggest national nuclear program in Europe based on a fully developed nuclear support industry including the complete nuclear fuel cycle.

Framatome and Siemens have not only worked together for 10 years in developing the European Pressurized Water Reactor (EPR), but also teamed up for major projects all over Europe such as steam generator replacements. They also combined their expertise to upgrade Russian designed nuclear power plants to western standards – like the two units of the Mochovce and Bohunice plants in Slovakia as well as Kozloduj 5 and 6 in Bulgaria.

The merger of Framatome's and Siemens's nuclear activities will combine the expertise of the two leading European companies and extend their existing cooperation in the development of the EPR to the total field of nuclear capabilities.

This merger will benefit the customers and more generally the public as a whole.

The Joint Venture will

- increase the competitive strength of our products and services
- ensure overall plant expertise because – on account of a broader personnel basis – maintain the manpower required for the conservation and extension of know-how.
- provide integrated technical know-how through utilization of Framatome's and Siemens' joint experience for the operation of nuclear power plants.
- enlarge the scope of supply through the integration of complementary products and services, e.g. in the nuclear fuel cycle sector.

Our customers are the foundation of our business. We are confident that the Joint Venture will serve the nuclear electricity production in Europe and worldwide by providing improved products and services, safely and economically.

Takashi Kawamura
Executive Vice President and Director, Hitachi, Ltd.

A BNFL GROUP PERSPECTIVE ON CONTINUING REORGANIZATION OF THE NUCLEAR POWER INDUSTRY

C Loughlin
Director, British Nuclear Fuels

ABSTRACT

Over recent years, the nuclear power industry has been readjusting to changing external forces. These include increasing deregulation of electricity generation and supply infrastructure in many countries including Japan, overcapacity for the provision of many fuel cycle services, changes in the economic framework for building new generating capacity, increased focus on the environmental impact of nuclear power, and heightened public concern.

Against this backdrop, it becomes ever more important for companies to be offering products and services to their customers efficiently and cost-effectively. A key option for achieving this within the nuclear industry is consolidation of the supplier base. Advantages of consolidation include:

- reduced costs due to better utilisation of resources (and the sharing of these savings with customers)
- packaging of products and services to better address the specific needs of customers
- the opportunity to better focus customer care.

None of these activities involve any compromise on safety or quality - indeed the ability to identify best practices and to disseminate such practices across the enlarged company can be a major benefit from successful consolidation.

This paper looks at the potential benefits – both to companies and to their customers - of consolidation within the nuclear industry, and at ways in which some of the barriers to successfully achieving the full benefit may be overcome. It concludes that, in many respects, the same factors which have led to major consolidation in other spheres, such as the automotive and banking industries in Japan, the UK and elsewhere, are relevant to nuclear power and nuclear services.

COGEMA

Nuclear Energy in the United States: A Time of Opportunity

Steven R. Specker, President
GE Nuclear Energy
San Jose, CA USA

As little as three years ago it was commonly thought that about 20% of U.S. operating plants might be shut down for economic reasons. Today these plants are considered to be valuable assets and are actually being bought and sold. What has transpired in those three years is nothing short of remarkable.

Deregulation of the electric utility industry has provided an impetus for improving the performance of nuclear plants in the United States. The average capacity factor of all U.S. plants in 1999 was 86%, an increase of over 10% from three years ago. Since 1990 the increase in output from these plants, from power uprates and improved capacity factors, is the equivalent of 12 new plants. The best nuclear plants today produce electricity for 1.5 cents per kwhr, which, in some places, is half that of plants using natural gas. These well run plants are valuable assets for their owners.

An unblemished safety record is a business imperative. The closure of a nuclear facility for even a short time can wipe out a company's annual earnings. A prolonged shutdown can destroy the business altogether. The NRC's improved regulatory process, which took effect earlier this month, puts the burden of safety exactly where it belongs--upon those who have the most to gain from safe operations.

There are at least two economic challenges that need to be tackled. The first is to reduce the disparity between the best plants and those in the last quartile of performance. The second is to avoid complacency. The future may very well bring us

even higher efficiency gas turbines or lower natural gas prices, in which case today's nuclear costs may only be marginally competitive

We firmly believe that productivity can take the nuclear industry to the next level of competitiveness. Productivity improvement has propelled other industries into a position of global competitiveness and it can do the same for ours. Moreover, increasing productivity means that no one will ever find themselves in a situation in which there is a temptation to cut corners on safety and quality in a vain attempt to lower costs.

Imagine if the productivity in our industry was equal to that of fossil fuel generators. What does a 3-fold increase in productivity mean? We would operate our nuclear plants with 250 people per 1000 Mwe plant, which would result in an annual savings on the order of $40M per plant. This represents a reduction of 0.5 cents per kwhr or about a 50% reduction in O&M costs.

This improvement will be the result of many factors. Consolidation will contribute to more efficient operations. We think that the e-business revolution will also play a huge role. In fact, the nuclear industry, which is characterized by large flows of information, is ideally suited to the productivity benefits of e-business.

Global Nuclear Fuel, GE's new joint venture with Hitachi and Toshiba, officially opened its doors for business on January 1, 2000 and we are making a smooth transition from 3 companies and businesses to one. GNF has created a deeper pool of experience, talented people, know-how, and R&D capability. The benefits will be advanced fuel designs with higher margins and improved reliability.

〔MEMO〕

〔MEMO〕

〔MEMO〕

LUNCHEON (12:15-14:15)

Reception Hall, B Block, Tokyo International Forum

- Remarks
- Special Lecture

Future of Japan and the World

Tsuyoshi Mori
Professor Emeritus, Kyoto University, Japan

〔MEMO〕

THIRSDAY, APRIL 27

SESSION 3 (14:30-17:30)

"How to Formulate Energy Policy for the Future?"

With the 21st century upon us, many problems, such as environmental protection, face Japan, Asia, and the rest of the world in their development of energy policies. It is also necessary to heighten the general interest in the problems of energy and nuclear power, by educating and carrying out dialogues between the young generation who will shoulder the future. At the same time, there must be an expanded training of the young people of nuclear technologies for the future. It is needed to increase opportunities for debates on such issues in national legislatures and other supreme bodies. This session will invite young politicians to discuss a future energy policy as well as implementing measures.

- Panel Discussion
- Discussion with the floor

Prospect of Japan's Energy Policy for the Future

Yoichi Kaya
Professor Emeritus, University of Tokyo

〔MEMO〕

〔MEMO〕

〔MEMO〕

FRIDAY, APRIL 28

Symposium in Tokaimura (11:00-12:30, 14:00-16:30)

At Tokai Culture Center, Tokaimura

"After the JCO Accident—Outlook for the Future of Tokaimura"

The development of nuclear energy in Japan started at Tokaimura. The components making up the foundation of Japan's nuclear industry—radiation applications, nuclear reactors, establishment of the nuclear fuel cycle, and operational technology, etc. —were all researched and developed there. Also, Tokaimura serves as the center for the advancement of Japan's cooperative efforts with other nations in the area of nuclear energy.

The JCO criticality accident that occurred last September in Tokaimura greatly damaged the trust in nuclear energy invested by the Japanese people. Taking the accident as a serious lesson, the government has endeavored to reinforce the framework of safety and disaster preventive regulations, while the private sector is making new efforts to upgrade safety.

With many citizens from the village invited, the Tokaimura Symposium will address the relevant issues and serve as a forum for exchanging opinions. Presentations will be made explaining the industry's responses to the accident in the half year that has elapsed since it happened. There will also be a discussion of what should be done socially and structurally to reconstruct the safety system in a way acceptable to the residents of Tokaimura. The Symposium will be expected to serve as the starting point leading to the progressive future for Tokaimura and the Japanese nuclear industry.

- Presentations
- Panel Discussion

Recovery and Restart from the Accident

Tatsuya Murakami
Mayor of Tokaimura

Naotaka Oki
Director-General, Atomic Energy Bureau
Science and Technology Agency

Nobuya Minami
President, Tokyo Electric Power Co.

Lessons Learned from the JCO Accident and Our Tasks in the Future

Yumi Akimoto
President and CEO, Mitsubishi Materials Corp.

〔MEMO〕

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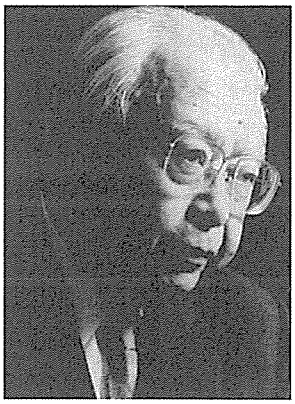
Short Biography of Chairmen, Speakers, and Panelists

Members of the Program Committee for the 33rd JAIF Annual Conference

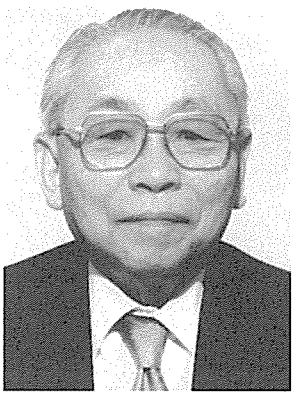
Chairman:	Akio Morishima	Chair of the Board of Directors Institute for Global Environmental Strategies
Members:	Yumi Akimoto	President and Chief Executive Officer Mitsubishi Materials Corporation
	Kunio Higashi	Professor Department of Nuclear Engineering Kyoto University
	Yohsuke Hoashi	Former Editorial Writer The Asahi Shinbun
	Takashi Kawamura	Executive Vice President and Director Hitachi Ltd.
	Shunsuke Kondo	Professor Dept.of Quantum Engineering and Systems Science University of Tokyo
	Hitoshi Kume	Professor Industrial and Systems Engineering Chuo University
	Hiroko Sumita	Attorney at Law Sumita Law Office
	Yukio Tateno	Senior Researcher Counsellor National Institute of Radiological Sciences
	Nobuya Minami	President Tokyo Electric Power Co., Inc.
	Tokunosuke Nakajima	Representative Director Nuclear Information Center
Observers:	Yukiya Amano	Deputy Director General for Arms Control and Scientific Affairs Foreign Policy Bureau Ministry of Foreign Affairs
	Masaharu Fujitomi	Deputy Director-General Agency of Natural Resources and Energy Ministry of International Trade and Industry
	Saichi Nakazawa	Deputy Director-General Atomic Energy Bureau Science and Technology Agency

OPENING SESSION



Jiro Kondo

Date of Birth : January 23, 1917
Education:
1940 graduated Faculty of Science, the University of Tokyo
1945 graduated Faculty of Engineering, the University of Tokyo
Career:
1958 Professor, the University of Tokyo
1975 Dean, Faculty of Engineering, the University of Tokyo
1977 Directer, National Institute for Environmental Studies
1985 Member and Chairman, Science Council of Japan (the 13th)
1988 Member and Chairman, Science Council of Japan (the 14th)
Commissioner, National Land Council 1990
Chairman, Central Council for Environmental Pollution Control
Commissioner, Science Council
1994- Vice Chairman, Japan Atomic Industrial Forum, Inc.
1998- President, Science and Technology Foundation of Japan
Awards:
1982 Purple Ribbon Medal
1990 Grand Cordon of the Order of the Sacred Treasure
1995 Person of Cultural Merits



Takashi Mukaibo

Date of Birth : March 24, 1917
1939 B. S. in Engineering, the University of Tokyo
1947-54, 1958-59 Associate Professor of the University of Tokyo
1954 Ph. D. in electrochemistry. at the University of Tokyo
1954-58 Science Attaché, Embassy of Japan in USA
1959-77 Professor of the University of Tokyo
1968-69 Dean, the Faculty of Engineering, the University of Tokyo
1977-81 President, the University of Tokyo
1981-91 Acting Chairman, Japan Atomic Energy Commission
1992- Chairman, Japan Atomic Industrial Forum, Inc.

1983- President, Japan Association of Engineering Education
1985- President, Japan Society for Science Policy and Research Management
1989- President, Engineering Academy of Japan
Awards : Order of Gorkha Dakshin Bahu, First Class, His Majesty a Government of Nepal (1977) ; Commondatore Al Merito Bella Republic Italiana (1980) ; Ordem Nacional do Cruzeiro American Nuclear Society and American Atomic Industrial Forum (1984) ; Ordem de rio Branco (Grande Official), Brasil (1988) ; the First Class Order of the Sacred Treasure (1989), etc.

Hirofumi Nakasone

Date of Birth: November 28, 1945 (Gunma, Japan)
Education: Graduated from the Faculty of Commerce, Keio University in 1965
Professional career:
1965 Manager for Asahikasei Industry Company (~ 1980)
1983 Elected to the House of Councillors (H.C.), Liberal Democratic Party (LDP)
1990 State Secretary for Ministry of International Trade and Industry
1993 Chairman of Commerce and Industry Committee, H.C.
Deputy Chairman of Diet Affairs Committee of the H.C., LDP
1995 Deputy Director, Commerce and Industry Division, Policy Research Council, LDP
Chairman of Women's and Social Education and Religion organization
Affairs Committee, LDP
1997 Chairman, Committee on Rules and Administration, H.C.
1998 Director, Policy Board of the H.C., LDP
1999 Minister of State for Science and Technology; Chairman of the Atomic Energy Commission; Minister of Education, Culture and Sports

President Position:
Minister of State for Science and Technology (Appointed in October, 1999)
Minister of Education (Appointed in October, 1999)
Chairman of Atomic Energy Commission (Appointed in October, 1999)
Chairman of Space Activities Commission (Appointed in October, 1999)
Member of the House of Councillors (LDP) (Elected three times since 1986)

Akio Morishima

Date of birth: November 14, 1934
Current Position: Chair of the Board of Directors / President, Institute for Global Environmental Strategies (IGES)
Education: Faculty of Law, University of Tokyo, L.L.B., 1958; Harvard Law School, L.L.M., 1968
Professional Career:
1996-00 Professor, Sophia University, Japan
1994 Professor Emeritus, Nagoya University. Japan
1994-96 Dean, Graduate School of International Development, Nagoya University, Japan
1991 Visiting Professor, Leiden University, Netherlands
1988-90 Dean, Faculty of Law, Nagoya University, Japan
1998 Visiting Professor, Faculty of Law, University of British Columbia, Canada
1976-77 Visiting Professor, Harvard Law School, U.S.A.
1971-96 Professor, Faculty of Law, Nagoya University, Japan
Current Involvement: Member, Council of Law and Institution, Ministry of Justice; Chairman, Policy and Planning Commission, Central Council of Environment, Environment Agency; Member, Central Council of Social Health Insurance, Ministry of Health and Welfare; Chairman, Consumer Economy Commission, Council of Industrial Structure, Ministry of International Trade and Industry; President, Association of Environmental Law and Policy; President, Japan Association of Environmental Science ,etc
Awards: Global 500 Award (UNEP), 1996 Environmental Protection Award (Environment Agency), 1995

SESSION 1

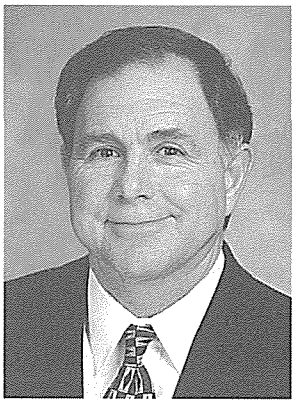
Soichi Iijima

Born in November 28, 1922 in Nagano, Japan

At present
Honorary Professor of Hiroshima University and Nagoya University
Vice Chairman of Japan Atomic Industrial Forum, Inc.

Academic career:

1946	Graduated from Nagoya University in medicine
1961	Became Professor of Pathology at Hiroshima University
1969-77	Served as President of Hiroshima University
1978	Became Professor of Pathology at Nagoya University
1981-87	Served as President at Nagoya University



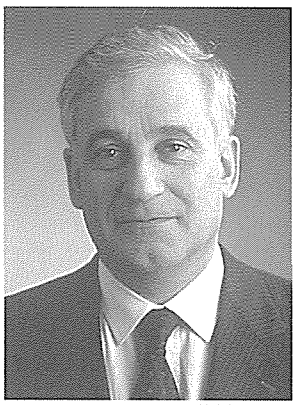
Joe F. Colvin

Joe Colvin is president and chief executive officer of the Nuclear Energy Institute (NEI), the nuclear energy industry's Washington-based policy organization. Mr. Colvin assumed his current position in July 1996. Prior to joining NEI, Mr. Colvin was president and chief executive officer of the Nuclear Management and Resources Council (NUMARC).

From 1980 to 1987, Mr. Colvin held several senior management positions with the Institute of Nuclear Power Operations in Atlanta, Georgia. Before joining INPO, Mr. Colvin served 20 years in the United States Navy as a nuclear submarine officer. He was also a member of the Navy's Nuclear Propulsion Examining Board.

Mr. Colvin currently serves on the board of directors of Cameco Corporation, and a number of energy-related groups, including the Atlantic Council's steering committee on the long-term future of nuclear energy. He is also a member of the U.S. Chamber of Commerce's Association Committee of 100, the Heritage Foundation's President's Club, etc.

Mr. Colvin holds a bachelor's degree in electrical engineering from the University of New Mexico, has completed advanced studies in nuclear engineering, and is a graduate of Harvard University's Advanced Management Program. He is a registered professional engineer.

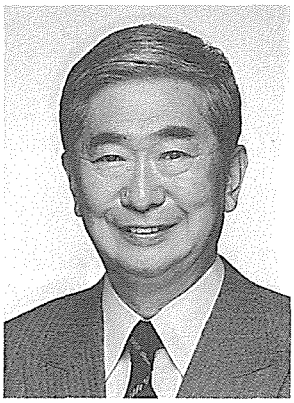


CEA/LABELLE

Pascal Colombani

Born in Neuilly sur Seine (France), on October 14, 1945.

Pascal Colombani has been Chairman and CEO of the French Atomic Energy Commission (CEA) since January 1, 2000.
Pascal Colombani is a graduate from Ecole Normale Superieure (1969) and holds a doctorate in nuclear physics from the University of Paris, Orsay (1974).
He started his career at the French National Center for Scientific Research (CNRS), where he specialized in heavy ion physics and nuclear spectroscopy at the Institute of Nuclear Physics in Orsay, and spent two years (1975-76) as a post-doctoral fellow at the Lawrence Berkeley Laboratory (California).
In 1978 he joined the Schlumberger group, where until 1997 he held various management positions both in the oilfield services and industrial sectors. He assignments included the Clamart (France) engineering center; Ridgefield (Connecticut) and Montrouge (France) Director of Research ; and to Tokyo (Japan) as President and representative director of the Japanese subsidiary.
In 1998-1999, Pascal Colombani was Director of Technology at the French Ministry of Education, Research and Technology. In that capacity he was in charge of overseeing the implementation of government policies in the general area of support to innovation and technology transfer, and of formulating sectorial policies in the areas of space and aeronautics, energy, bioengineering, information and communication technologies (including applications to education). He was also in charge of formulating and coordinating the French participation to the European Union R&D framework program.
Pascal Colombani is knight of the Legion of Honor.



Shintaro Ishihara

Born on September 30, 1932 in Hyogo

1956 Graduated from Faculty of Law, Hitotsubashi University

1956 Awarded "The 34th Akutagawa Prize" for his book "Taiyo no Kisetsu"
1968 Elected to the House of Councilors
1972 Elected to the House of Representatives from Tokyo electoral district No. 2
1976 Elected to the House of Representatives and appointed Minister of State for Environment
1979-95 Served as member of the House of Representatives
1987 Appointed Minister of Transport

Apr. 1999 Elected the Governor of Tokyo Government

Yasushi Matsuda

Date of Birth :November 24, 1928
Educational Background: Graduated from University of Tokyo (Electrical Engineering) in March 1957
Occupational Career :

April, 1957	Entered Ministry of International Trade & Industry (MITI)
April, 1974	Director of Power Reactor Development Division, Atomic Energy Bureau, Science & Technology Agency (STA)
August, 1975	Director of Reactor Regulation Division, Atomic Energy Bureau, STA
March, 1978	Director of Technology Division, Public Utilities Department, MITI
January, 1981	Deputy Director-General for Research Affairs, Agency of Industrial Science and Technology, MITI
October, 1982	Director-General, Agency of Natural Resources and Energy, MITI
June, 1985	Research Advisor, The Institute of Energy Economics Japan
June, 1987	Managing Director, Tohoku Electric Power Co., Inc.
June, 1991	Vice-President, Tohoku Electric Power Co. Inc.
June, 1997	Executive Advisor, Tohoku Electric Power Co. Inc.
April, 1998	President, Nuclear Power Engineering Corporation (NUPEC)

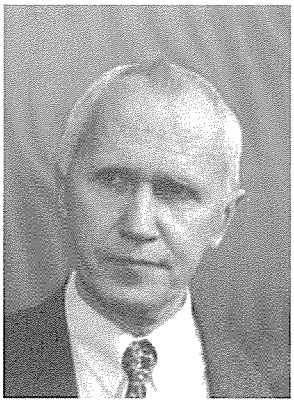
H.E.Kuniwo Nakamura

Date of Birth: November 24, 1943
Place of Birth: Peleliu State, Republic of Palau

Education:
1967 Bachelor of Art degree in Economics and Business Admin, University of Hawaii

Major public service:

Jan 1997-	President of the Republic of Palau (2nd term)
1993-96	President of the Republic of Palau (1st term)
1990-92	Vice President /Minister of Justice, Rep of Palau
1989-90	Vice President /Minister of Administration, Palau
1989-90	Vice President /Chairman, Commission on Future Palau/US Relation
1980-88	Member of the Senate, Palau National Congress
1979-80:	Member or the 7th Palau Legislature, Served as Chairman of the Ways & Means Committee and Palau Maritime Authority, among other committee assignments
1978-79:	Member or the 6th Palau Legislature
1975-78:	Two term member of the House of Representatives of the former Congress of Micronesia

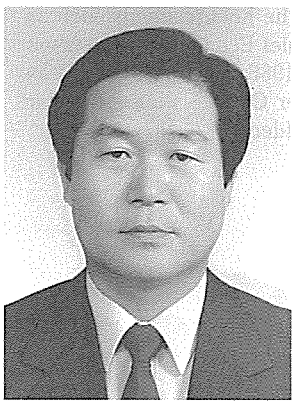


Evgeny O. Adamov

Evgeny Olegovich Adamov was appointed to the position of the Minister of the Russian Federation of Atomic Energy by the Presidential Decree of March 4, 1998.
Evgenv Adamov was born on April 28, 1939 in Moscow. In 1962 he graduated from Moscow Aviation Institute. After graduation he was assigned to the Institute of Atomic Energy (IAE) named after I. V. Kurtchatov as an engineer, and through the years has carved his carrier to the position of the Deputy Director of the Institute.

During his years in IAE from 1962 to 1986 Dr. Adamov directly participated in the development of a number of special installations, headed the work on the design and development of reactor engineering support systems, made a significant contribution to the conceptual development and experimental substantiation of high-temperature reactors and power systems.
On November 5, I986 he was promoted to the position of the General Designer and Director of Research and Development Institute of Power Engineering (RDIPE) in Moscow.

In May-August, 1986 Dr. Adamov directly participated in the elimination of the consequences of the accident at Chernobyl NPP, coordinated the activities of IAE experts and repeatedly visited the site of the accident.
Evgeny Adamov is Doctor of Science (Tech.), the author of more than 100 scientific papers, speaks fluent English.



Park, Yong-Taek

Date of birth: July 20, 1943
Education: B.S., Mechanical Engineering, Seoul University, 1970
Experience:

Mar. 1999-	Executive Vice President
1998-99	Vice President, Nuclear Power Division
1995-98	General Manager, Nuclear Power Construction Dept.
1994-95	Site Manager, Yonggwang 3&4 Construction Office
1986-93	Project Manager, Yonggwang Units 3&4
1970	Joined the Korea Electric Power Corp.

Present society membership:
Director, Korean Nuclear Society

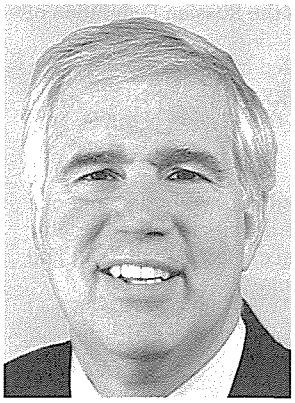
Honors and Awards:

1996	Medal for Industrial Service Merit, awarded by the Korean government
1983	Medal for Industrial Service Merit, awarded by the Korean government

Taizo Nishimuro

Born on December 19, 1935. Graduated from the Faculty of Economics of Keio University in 1961

Taizo Nishimuro's career includes several key assignments where he played a major role in building Toshiba's business overseas and in Japan.
His first overseas assignment after joining Toshiba in 1961 came in 1965, when he was sent to Toshiba America, Inc. While there, he served as sales manager of the Electronic Components Division for three years.
In 1971, he returned to America, serving four years as special assistant to the President of TAI. In 1975, as Vice President and General Manager of Consumer Products of TAI, he helped vitalize marketing of Toshiba's consumer electronics products in America, serving four more years.
In 1979, he returned to Japan to become senior Manager of Toshiba's Electronics Components Department of International Operations - Electronics Products. In 1984, he was promoted to General Manager of a new division, International Operations - Electronic Components. In 1986, he was named General Manager of the Semiconductor Marketing and Sales Division, where he was responsible for Toshiba's worldwide business in that key sector.
In 1992, Mr. Nishimuro began his final assignment in the U.S., as Vice Chairman of TAI, serving three years until late 1994.
In 1994, he was promoted to Senior Vice President of Toshiba Corporation, and in 1995, he became Executive Vice President. In that post, he was responsible for Toshiba's Information Media and Consumer Products business. From 1995, Mr. Nishimuro was also vice group executive of Toshiba's Advanced-I Group, an organization dedicated to promoting Toshiba's multimedia capabilities and business.
Mr. Nishimuro was appointed President and Chief Executive Officer of Toshiba Corporation in July 1996.



Richard A. Meserve

Richard A. Meserve was sworn in as Chairman of the Nuclear Regulatory Commission on October 29, 1999. Prior to that, he was a partner in the Washington, D.C., law firm of Covington & Burling, having joined the firm in 1981. From 1977 to 1981, Dr. Meserve served on the White House staff as legal counsel to the President's Science and Technology Advisor.

Holding degrees in law and physics, the new NRC Chairman has focused on a wide range of issues during his career, including such matters as environmental law, nuclear licensing, counseling of high-tech companies and scientific societies, nuclear non-proliferation, and declassification.

Dr. Meserve received a B.A. from Tufts University (magna cum laude) in 1966, a J.D. from Harvard Law School (magna cum laude) in 1975, and a Ph.D. in applied physics from Stanford University in 1976. He served as a law clerk to Justice Harry Blackmun of the United States Supreme Court and before that to Judge Benjamin Kaplan of the Massachusetts Supreme Judicial Court.

He served as chairman or a member of several National Academy of Sciences committees. For example, just before taking his new post, Dr. Meserve was chairman of the National Academy of Sciences committee seeking ways to bolster the protection of nuclear weapons-grade material in Russia.

Li Zhongliang

In 1966 Mr. Li graduated from Qinghua University. From 1968 to 1986, he held positions such as Deputy Director of Division of Planning, Vice Chief Accountant, and Chief Economist of Lanzhou Uranium Enrichment Plant in the Ministry of Nuclear Industry. From 1986 to 1998 he served as Deputy Director and then Director of Bureau of Finance, MNI and later China National Nuclear Corp, and Chief Accountant, CNNC. Since 1999 Mr. Li has been Vice President of CNNC

SESSION 2

Hiroyuki Torii

Date of Birth: July 17, 1942
Education:
1967 Graduated from the University of Tokyo
1969 Master of Engineering, the University of Tokyo

Career:
1969 Joined Nihon Keizai Shimbun
1969-76 Scientific News Correspondent
1976-82 Industrial News Correspondent
1982-84 Scientific News Correspondent
1984-87 Senior Fellow, Nikkei Industrial Research Institute
Editor-in-Chief of Nikkei High Tech Report
1987- Editorial Writer

Bodo Kalthoff

Based on an engineering education in mechanical/chemical engineering, scientific work in the field of the High Temperature-Reactor in Juelich, Germany and the Dragon Project, Great Britain.

Eight years as Sales Manager for Nuclear Fuel Cycle Services with the French Pechiney Group, Paris, covering Uranium conversion, Zirconium-alloy products and fuel assemblies.

After a short excursion into the heavy component and equipment business (Noell, Germany), since 1985 back into the nuclear fuel cycle with EXXON Nuclear respectively Siemens Power Corporation in Brussels, Belgium (sales) and Richland, USA (head of project management, purchasing and scheduling).

In 1992 transfer to Siemens/KWU at Erlangen/Germany with responsibility for Sales and Project Management of Nuclear Fuel and related services.

Since October 1997 extended responsibility as Vice President Sales for the overall nuclear business of the Siemens KWU Power Generation Group.

Member of VDI (German Engineering Association) and KTG (German Nuclear Association).

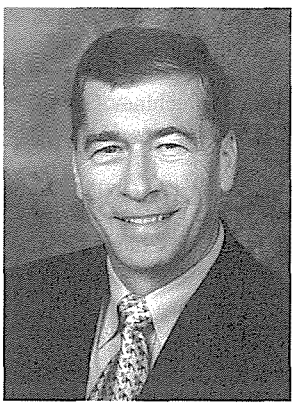
Takashi Kawamura

Education:
1962 Graduated from Electrical Engineering Department, Faculty of Engineering, University of Tokyo

Career record:
1962 Joined Hitachi, Ltd.
1972 Assigned to a Senior Engineer of Power Electric Machine Design Department, Hitachi Works
1987 Assigned to the Division Manager of Thermal Power Engineering Division, Power Group.
1992 Assigned to the General Manager of Hitachi Works
1995 Assigned to a Board Director and the General Manager of Hitachi Works
1995 Assigned to a Board Director and the Group Executive of Electric Utility Sales Operations Group
1997 Assigned to a Executive Managing Director and the Group Executive of Power Group
1999 Assigned to a Executive Vice President and Director (Present position)

Chris Loughlin

Chris Loughlin is a BNFL Director responsible for Thorp, Magnox, MOX, Transport and Interim Storage services. He joined BNFL in 1981 after a career in the construction industry. He has held a variety of positions in BNFL before his appointment as Director of Transport in 1992. He is Chairman of BNFL's French Company BNFL SA and Chairman of the World Nuclear Transport Institute.



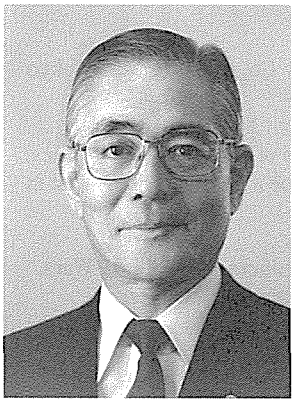
Steve Specker

Experience and qualifications:
Dr. Specker has over twenty-five years of diverse technical, marketing, sales and business management experience within the nuclear industry. He is responsible for all GE activities in the nuclear power industry. He is a member of the Board of Directors of the Nuclear Energy Institute, and a member of the American Nuclear Society.

Education and certifications:
B.S. in Engineering Science, M.S. and Ph.D in Nuclear Engineering, Iowa State University, 1967-1970. Received a Professional Achievement Award from Iowa State University - June 1994. Registered Professional Engineer in California.

Employment history:
President-GE Nuclear Energy, San Jose, CA, March 1992 to present, responsible for all of GE's commercial nuclear power activities.
General Manager-GE Meter & Control Department, Somersworth, NH., 1989-1992.
General Manager-Industry Services Engineering Department, Schenectady, NY, 1988-1989.
Services General Manager-Material Services, GE Nuclear Energy, San Jose, CA 1985-1988.
Manager-Regional Customer Service, Nuclear Services Marketing Department, GE Nuclear Energy, Chicago, IL, 1983-1985.
Manager-Nuclear Engineering, GE Nuclear Energy, San Jose, CA, 1978-1983.

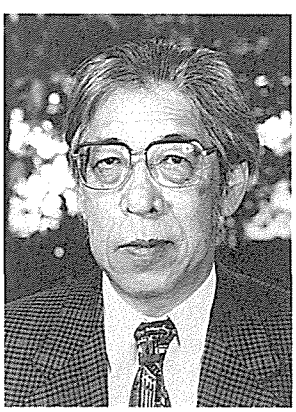
LUNCHEON



Shoichiro Kobayashi

Born on July 14, 1922 in Osaka City
Education: B.A., School of Economics, University of Tokyo in 1946

1947 Joined Kansai Electric Supply Co.
1965 Manager, Power Sales Department, Kansai Electric Power Co.
1966 Deputy General Manager in charge of Corporate Planning
1967 Deputy General Manager in charge of Corporate Planning and Computerization and Mechanization Programs
1968 General Manager in charge of Office of the President and Subsidiary Business Operation
1970 Elected to Member of the Board of Directors
1972 Managing Director
1974 Senior Managing Director
1975 Executive Vice-President and Director
1977 President and Director
1985 Chairman of the Board
1997 Senior Advisor



Tsuyoshi Mori

Born in 1928 in Tokyo and grown up in Osaka

In 1950 Tsuyoshi Mori graduated from University of Tokyo in mathematics. He became Associate Professor in 1957 and then Professor at Kyoto University. He retired from the university in 1991. He is now Professor Emeritus of Kyoto University. He has been a freelance writer famous for his unequaled critique of social and cultural issues. He is author of more than 100 books.

SESSION 3

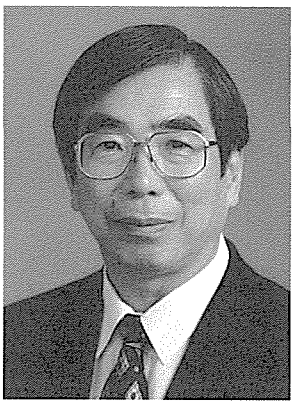
Soichiro Tahara

Born in 1934

After graduating from Waseda University, he joined Iwanami Movies Co. and then TV-Tokyo Broadcasting Co.

Mr. Tahara has been very energetic in extending critique of a broad range of issues such as politics, economy, industries, advanced technologies in mass media since he became a free-lance journalist in 1976.

He wrote many publications including "Nuclear Wars," "Japanese Bureaucracy," "Media Wars." His latest publication is "A Whale without Head — A Fact of a Political Drama."



Yoichi Kaya

Born on May 18, 1934 in Sapporo, Japan

Current Position:
Director General, Research Institute of Innovative Technologies for the Earth (RITE) Director, Crest environment program, Japan Science and Technology Corporation

Education and degrees from University of Tokyo:
B.A. in engineering, 1957; M.A. in engineering, 1959; Doctor of Engineering, 1962

Teaching and Research (Systems engineering in the field of energy and environment)
1978 Professor;
1993 Senator of University of Tokyo
1995 Professor Emeritus, University of Tokyo
1995- Professor, Keio University (SFC)
1998- Director General, RITE

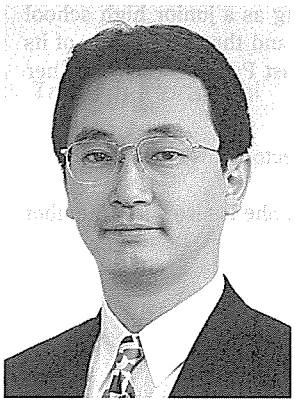
Other academic and governmental activities:
President, Institute of Electrical Engineers in Japan, 1993-94; President, Japan Association of Energy and Resources,1997-present; Advisor, Science and Technology Agency; Chairman, Demand-Supply Division, Energy Council, MITI; Member, Environment Council, Environmental Agency, etc.

International Activities:
Chairman of National Committee, International Institute of Applied Systems Analysis (IIASA);Member of the Board of Directors, Pacific International Center For High Technology Research Hawaii;Chairman of the Program Committee, 1995 WEC Tokyo Congress

Awards:
7 awards from 4 Japanese academic institutions and 3 publication awards

Yukio Edano

Career in Politics:
Present Member of House of Representatives; Deputy Chairman of the Policy Research Committee, Democratic Party of Japan
1998-99 Democratic Party of Japan, First Vice-Chairman of the Policy Research Committee
1996-98 Re-elected as Member of House of Representatives from Saitama 5th District. Committee on Legal Affairs of the House. Democratic Party of Japan Executive Board Member and the Chairman of the Policy Research Committee.
1993-96 Elected as Member of House of Representatives from Saitama 5th District. New Party Sakigake (Harbinger) Deputy Chair of the Policy Research Committee, Head of the Task Force for Investigation of HIV Problem, and so on.
Qualification and Professional Experience:
1988 Passed the Bar Examination.
1991- Takayama Law Firm.
Education:
Tohoku University(March 1987) in Sendai, Japan B.A. in Law
Writings
"Legal Consultation of Real Estate Conflict and Management (Co-author) " " Objection to Ozawa Ichiro's Japan Reform Plan(Co-author)" etc.



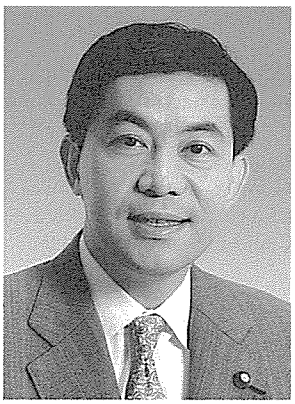
Akinori Eto

Born in 1955 in Towada City

Mr. Eto completed a graduate course in law at Nihon University in 1981. From 1984 to 1995 he served as Lecturer at Hachinohe College. He managed schools and facilities for physically and mentally handicapped people in his native area.

In 1996 he was first elected to the House of Representatives from Aomori electoral district No. 2 as a member to the Liberal Democratic Party. Since then, he was involved in the House Committee activities as diverse as Rules and Committee; Science and Technology; Health and Welfare; Post and Telecommunications; Stabilization of Financial Systems; Juvenile Affairs, etc.

He has experienced the LDP positions such as the Diet Affairs Committee member; Vice Chairman of Committee of Social Welfare related Organizations; Deputy Head of Youth Division; Labor Administration Division, etc.



Yasufumi Tanahashi

Born on February 11, 1963

1987 Graduated from Faculty of Law, University of Tokyo (B.A. in Private Law) and joined Ministry of International Trade and Industry.

1992 After promoting to Assistant Chief of Electronics Policy Division, resigned from the Ministry.

1993 Became Lawyer

1996 Elected to the House of Representatives from the Gifu electoral district No. 2. Became a member of the Diet Affairs Committee of Liberal Democratic Party; the House Committee on Rules and Administration; the House Committee on Labor, etc.

1997 Became Deputy Director-General, Secretariat of Special Commission on Legal System of Liberal Democratic Party (LDP)

1999 Became Deputy Director, Transportation Division, Policy Research Council, LDP; Deputy Director, National Defense Division, Policy Research Council, LDP

Kiyomi Tsujimoto

Born in Nara Prefecture on April 28th, 1960. Now lives in Tokyo.
In 1987 graduated Waseda University. Bachelor degree in social studies.

Occupation and other activities:

1983 Founded the international citizens' group, "PEACE BOAT". Succeeded in organizing cruises over the world for 20 times. Visiting 60 countries for people's exchange and grass-root aid. More than 10,000 people from various countries have joined its activity. Appeared on television and radio programs regularly as a commentator.
1992 Attended the environmental NGOs' largest gathering "Earth Summit" held in Brazil as one of the representatives of Japanese NGOs.
1993 Won the educational prize of "Avon women's award".
1995 Coordinated 2,000 volunteers to help victims of Kobe earthquake.
1996 Elected to be a member of the House of the Representatives from Kinki proportional block. A member of Social Democratic Party (SDP).
1998 Deputy General Secretary of SDP. Director of Press Bureau of SDP. Member of the Committee on Science and Technology, and the Committee on Security, House of Representatives.

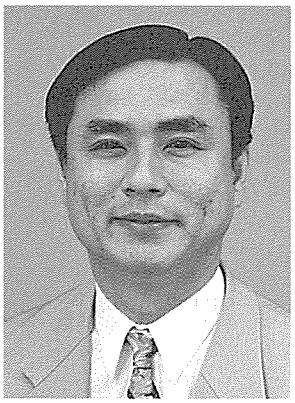
Publications:
"New-type-youngsters is sailing out!" "Be as you are" "My new job is a Diet woman" "Tsujimoto Kiyomi's report from Japanese Parliament"

Kimie Hatano

She was born in 1957 in Kawasaki, Kanagawa Prefecture. After serving as a junior high school teacher for four years, she became an executive committee member of and the chairperson of its Kanawaga Chapter of "Minshu Seinen Domei" with the Japan Communist Party to carry out her political activities.

In 1997 she was elected to the House of Councilors from the Kanagawa electoral district.

Ms. Hatano belongs to the House Committee on Education and Sciences. She is also a key member with the House's special study committee for public and economic affairs.



Yutaka Fukushima

Born on January 4, 1958 in Sakai City, Osaka

Mr. Fukushima graduated from Medical School of Kyoto University in 1983 and continued medical study at the postgraduate school. In May 1984, he started his career as a medical doctor at Toyooka Public Hospital.

In January 1993, he became Deputy Secretary General at the then Komei Party Osaka Prefectural chapter and in July he was elected to the House of Representatives from Osaka electoral district No. 7. In 1995 Mr. Fukushima was designated a member of the House Education Committee. He was elected as member of the House for the second term in October 1996.

His current positions include Director of the House Health and Welfare Committee, Vice Chairman of the Komei Party Policy Research Council, etc.

TOKAI SESSION

Tatsuya Murakami

Born on February 16, 1943

In 1966 after graduating from Faculty of Social Studies, Hitotsubashi University, he joined Joyo Bank based in Ibaraki Prefecture. He held various key positions with the bank until he retired in June 1997. In September 1997, he was elected to the Mayor of Tokaimura, Ibaraki. He now serves as Vice Chairman of the association of local autonomies with nuclear facilities sited.

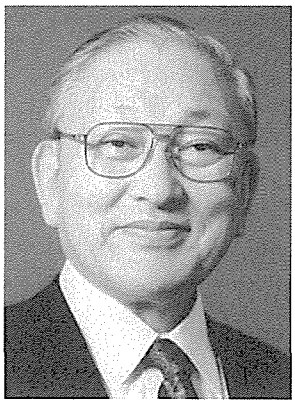
Naotaka Oki

Date of Birth: July 23, 1944
Place of Birth: Shimane Prefecture, Japan
Education: Graduated from Department of Chemistry. Graduate School of Science, Tohoku University
Career:
1969 Entered Science and Technology Agency(STA)
1977 Deputy Director, Institutes Administration Division, Atomic Energy Bureau(AEB), STA
1978 Deputy Director, Nuclear Safety Policy Division, Nuclear Safety Bureau, STA
1981 First Secretary, Japanese Embassy in Austria
1984 Director for Cancer Research, Life Technology Division, Research Coordination, Bureau, STA
1985 Director, Institutes Administration Division, AEB, STA
1988 Director, Research and International Affairs, Division, AEB, STA
1989 Director, Space Development Division, Research and Development Bureau(RDB), STA
1991 Director, Space Activities Planning Division, RDB, STA
1992 Director, Finance Division Minister's Secretariat, STA
1994 Deputy Director-General, AEB, STA
1997 Deputy Director-General, Minister's Secretariat, STA
1998 Deputy Vice-Minister, STA
1999 Director-General, AEB, STA

Nobuya Minami

Date of Birth: November 15, 1935
Education: 1958 Graduated from Faculty of Law, University of Tokyo
Present Position: President, the Tokyo Electric Power Company, Inc.
Professional Career:
1958 Joined the Tokyo Electric Power Co, Inc.
1977 Manager, Corporate Planning Department
1983 General Manager, Suginami Branch Office
1985 General Manager, Corporate Planning Department
1989 Director and General Manager, Corporate Planning Department& Corporate Communications Department
1991 Managing Director
1996 Executive Vice President
1999- President

Other Activities:
1999- Vice Chairman, Japan Association of Corporate Executives



Yumi Akimoto

Born on March 14, 1929

1951 BS, Chemistry, Tokyo Bunrika University (Tsukuba University)
1957 Ph.D.,Tokyo Bunrika Univ.
1954 Joined Mitsubishi Materials Corp.(MMC)
1954-57 Metallurgical refining process development, Hosokura Smelter, MMC.
1957-58 R&D on uranium refining, MMC
1958-60 Research on actinide chemistry, Lawrence Berkeley Laboratory
1960-77 R&D on Nuclear Fuel Cycles, Electronic Materials Production and New Metal Refining, MMC
1974-76 General Manager, Nuclear Fuel Cycle Dept., MMC
1976-81 General Manager, Nuclear Energy Dept., MMC
1981-86 Managing Director, MMC
1986-92 Senior Managing Director, MMC
1992-94 EVP, MMC
1994- President and CEO, MMC

Professional membership: Atomic Energy Society of Japan; Special Committee for the Atomic Energy Commission of Japan; Engineering Academy of Japan
Awards and other achievements:Award for Distinguished Research Achievement, Power Metallurgical Society of Japan(1968), Medal with Blue Ribbon from the Japanese Government(1997), etc.

1993 Became Lawyer
1996 Elected to the House of Representatives from the Gifu electoral district No. 2. Became a member of the Diet Affairs Committee of Liberal Democratic Party; the House Committee on Rules and Administration; the House Committee on Labor, etc.
1997 Became Deputy Director-General, Secretariat of Special Commission on Legal System of Liberal Democratic Party (LDP)
1999 Became Deputy Director, Transportation Division, Policy Research Council, LDP; Deputy Director, National Defense Division, Policy Research Council, LDP

Together, BNFL and Westinghouse have over 50 years of experience in the nuclear industry. This time has been spent working closely with our customers and responding to their needs.

Together, our capabilities span the entire nuclear energy cycle at sites all round the globe, employing some 20,000 skilled people.

We are committed to the development of the nuclear industry and are determined to continue to serve our customers.

And together, we share a common vision – to become the leading global nuclear company.

For more information on BNFL Japan KK and Westinghouse Electric Asia S.A. Japan, call (03) 3287-1385, fax (03) 3213-6674 or email:robert.c.bonner@japan.bnfl-w.com

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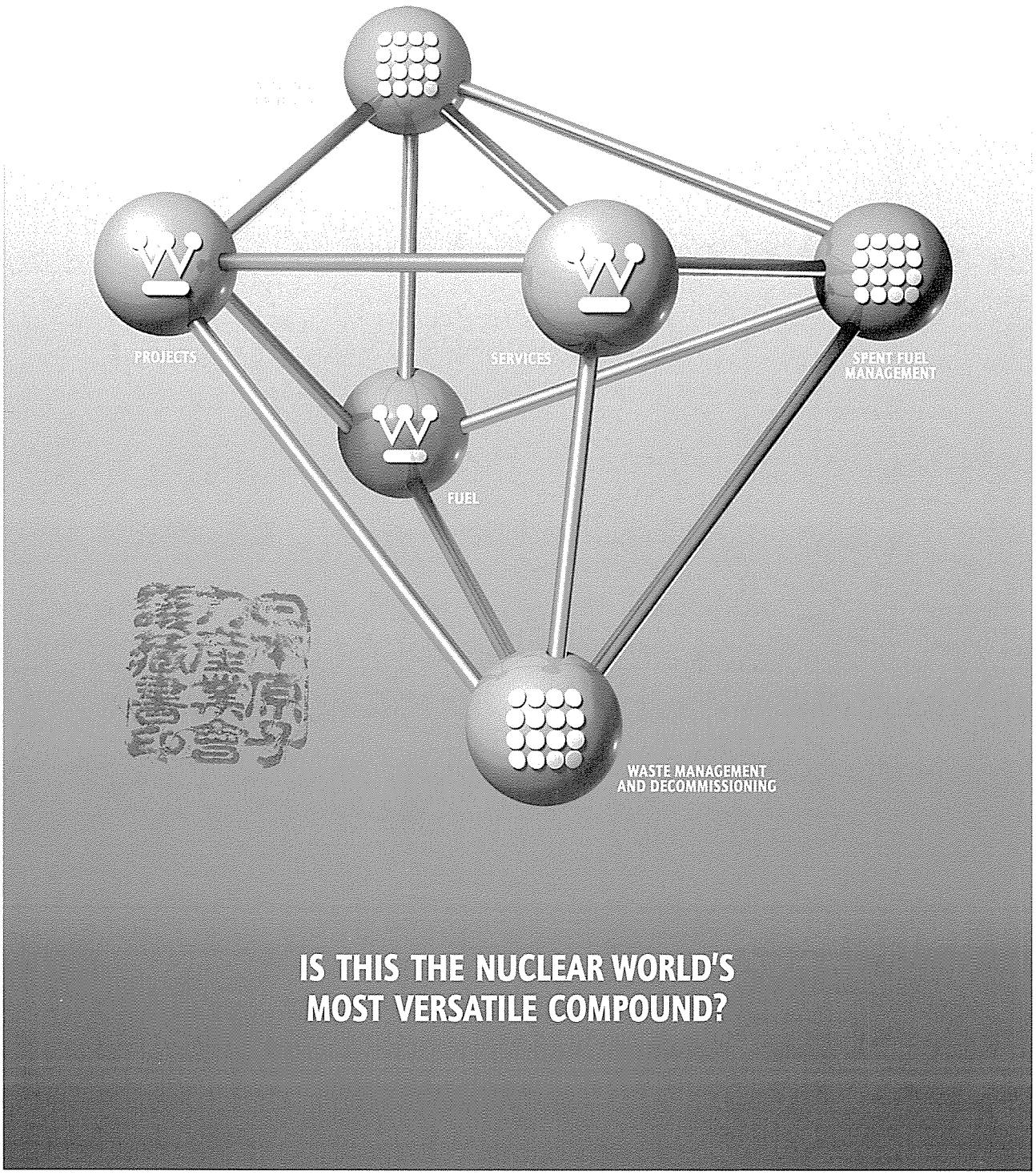

About 50 years ago mankind first generated nuclear power. It was an experiment. It worked. Commercial power generation began. And plants became increasingly complex.

Today the evolution is unceasing. But as our knowledge of nuclear energy increases, the trend is towards simpler systems that employ natural forces. Because, like the sun, nuclear energy occurs in nature. The way we are thinking at Hitachi, it's simply power from nature.

HITACHI

Every one of Toshiba's engineer is enthusiastic sbout creating an enviroment where individuals can live meaningful lives in comfort and abundance.We have directed concerted efforts to the development of **nuclear power** as a stable energy source for the 21st century.
The basic principle of Toshiba's Nuclear Energy Division is respect for humanity. This inspires us to devote ourselves to ceaseless technical advances that contribule to the realization of a better environment and the development of society.

TOSHIBA

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POWER SYSTEMS & SERVICES COMPANY
NUCLEAR ENERGY DIVISION
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