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The ANS Globe

...e-news from the ANS International Committee

From the editors

The ANS Globe is the Bulletin of the American Nuclear Society's International Committee. In its renewed, electronic format, *The ANS Globe* celebrates its 5th anniversary with this 10th issue! The Editors would like to thank all who have sent news, messages, and articles to *The ANS Globe* since 2004, thus contributing to its continued presence.

The ANS Globe has as its mandate the dissemination of news of international interest to International Committee members and to others. Please send us your letters, articles, and/or comments for consideration towards the next issue.

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From the Chair



Dear friends,

I am really glad to introduce this issue of the ANS Globe which is a special one: the 10th of its kind... You will find news from all over the world, from over 20 different national nuclear societies and international bodies thanks to an outstanding work from Landy Langley, Ben Rouben, Mauro Bonardi and your continued input.

In addition, this year 2008 seems to be a very famous milestone as I note SEVEN anniversaries to be celebrated:

First, the **OECD/Nuclear Energy Agency**, composed of 28 members countries and at the head of 20 international joint projects (funded by participants), has celebrated this month **50 years** of international service in assisting its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes.

The **Swiss Nuclear Society**, as well as the **Swiss Nuclear Forum**, founded 50 years ago, is probably, along with the ANS, amongst the few pioneer national nuclear societies in existence since the 1950s, following the Atoms for Peace Conference.

Moreover, we want to express also our best congratulations to **Sociedad Nuclear Mexicana**, the **Nuclear Society of Russia** and the **Swiss Paul Scherrer Institute** for their continuing activities during **20 years**.

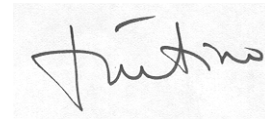
Let me now underline that at a time of nuclear technology renaissance, security of supply is a cornerstone of energy policy and has become more prominent on the agenda of policy makers following increasing tensions in oil and gas markets, rising prices of hydrocarbons and environmental constraints. The role of nuclear energy in enhancing national security of supply and reducing carbon emissions has been recognised by many countries worldwide and, consequently, world nuclear-capacity projections have been revised upwards recently by a number of credible institutions:

- The International Atomic Energy Agency (IAEA), in its annual *Energy, Electricity and Nuclear Power Estimates for the Period to 2030* shows an increase from 372 GWe today to 473 GWe (low projection) or 748 GWe (high projection) in line with forecast growth in power generation.
- The US Energy Information Administration (EIA) has also revised its normally low projections upwards in its annual *International Energy Outlook 2008*: to 498 GWe in 2030. This is 34% higher than its 2030 projection published in 2003.
- The *World Nuclear Association* has also introduced *Nuclear Century Outlook* projections for nuclear growth extending to 2100, based on country-by-country assessments using optimistic and pessimistic assumptions. For 2030, global capacity results are ranging from 550 GWe to 1200 GWe.

One major challenge to be tackled as a matter of priority in order to ensure adequate support to this estimated deployment involves the robust development of an overall education and training effort in respect of the future nuclear manpower, as soon as possible. [President Burchill](#) has eloquently drawn attention to this issue, which implies partnership between universities, industry and government.

The ANS can, of course, play a major role in sponsoring methods to achieve this goal, for example through topical meetings, such as the series of CONTE meetings, toward establishment of adequate national and possibly international training infrastructures, networks and students exchanges.

Looking forward to seeing you in Reno to discuss and push forward this exciting item “Nuclear Power - Ready, Steady, Go”.



France Brès-Tutino

The ANS International Committee's Web Page

Visit the enhanced ANS International Committee's Section on the ANS website, located at <http://www.ans.org/const/international>. It includes:

- Background information about the ANS International Committee
- Connections to ANS International Local Sections
- An overview of Society alliances with international organizations (INEA, INSC, and PNC), along with contact information
- Connections to 30 ANS Agreement Societies/Organizations, and
- Current/back issues of *The ANS Globe*, which features ANS International Committee activities and related items.

News from Sister Societies and International News



Fond Remembrance of Dr. Kiyoto Aizawa

Kindly provided by IC member

[Dr. Hisashi Ninokata](#)

Dr. Kiyoto Aizawa, who was a member from 1998 to 2003 of the Board of Executive Directors of the Japan Nuclear Cycle Development Institute (JNC) [currently Japan Atomic Energy Agency (JAEA)], passed away in hospital on April 17, 2008, from long-suffering lung cancer. He was 62 years old.

Dr. Aizawa was a member of the ANS International Committee, as well as a representative of the Atomic Energy Society of

Japan to the International Nuclear Societies Council (INSC) since 2004. His most recent involvement with ANS was during the 2007 Winter Meeting in Washington DC. He regularly and earnestly attended the meetings. I was afraid that his health condition had turned worse when he did not make it for the Annual Meeting in Boston in June 2007. Therefore, when he showed up in Washington DC the same year, we all thought and hoped that his health and strength were improving. At that time, unfortunately, he was still fighting the disease, even during his attendance and significant contributions to the International Committee and INSC meetings.

Immediately after earning a Doctor of Engineering in nuclear engineering in 1973 from the University of Tokyo, Dr. Aizawa joined the Power Reactor and Nuclear Fuel Development Corporation (PNC), which subsequently became JNC in 1998 and JAEA in 2005.

Dr. Aizawa is fondly remembered for his devotion to liquid-metal-cooled fast-breeder-reactor (LMFBR) design and safety, and his advocacy was important in Japanese LMFBR development. He was always a main figure directing the JAEA's safety R&D program and the licensing applications of the experimental fast reactor Joyo and prototype fast-breeder reactor Monju. Monju, with a rated power of 280 MWe, has remained shut down since December 1995 up to now because of a sodium leak from a fatigued thermometer well in the secondary cooling system, which occurred shortly after the reactor began supplying the grid for the first time. Besides taking engineering remedial actions, JAEA had to fight off court actions by opponents.

During these long years of JAEA's challenging recovery efforts, Dr. Aizawa tried to regain the confidence of the public perception, and JAEA's credibility for restarting the Monju plant. I remember well that he, being a professional and aware that there is no shortcut to public acceptance, emphasized the importance of risk communication. Finally, the reactor is expected to be ready to go on line later this year, and it is sad that Dr. Aizawa will not be present to experience this positive and major result of his dedicated efforts.

When he became an Executive Director of JNC in 1998, Dr. Aizawa launched an initiative in the important project called "Feasibility Study on commercialized Fast Reactor Cycle Systems". His intention was to maintain FBR development and the related fuel cycle in the difficult circumstances following the sodium leak incident at Monju, and to reconstruct the Japanese LMFBR development strategy and programs. He successfully accomplished the project and made a transition to the current project for FBR cycle commercialization, i.e., FaCT Project (Fast Reactor Cycle Technology Development Project), which was selected as one of "Key technologies of National Importance" in 2006.

Dr. Aizawa was also involved in the initial activities of GIF (Generation IV International Forum), based on the promotion of the Feasibility Study project of Japan. It is Dr. Aizawa who built an essential basis for the current formulation and implementation of fast-reactor cycle development worldwide.

*June 8, 2008
H. Ninokata*

- [Australia](#)
(Information gleaned from “Nuclear Australia”, newsletter of the Australian Nuclear Association - ANA)

Australia’s key engineering body, Engineers Australia, has officially recognized the Australian Nuclear Science and Technology Organisation’s (ANSTO’s) first research reactor (HIFAR) as a national engineering landmark. HIFAR was officially shut down in January 2007, after operating safely for 47 years. HIFAR provided training to nuclear scientists and engineers, provided radioisotopes and radiopharmaceuticals for medical and industrial applications, and neutron beams for research. HIFAR is undergoing decommissioning, which will take 10 years to complete.

ANSTO’s OPAL Research Reactor began low-power testing in May 2008, following a shutdown since July 2007 for changes in the fuel design – and was then taken to its full power of 20 MW. OPAL will soon be producing radioisotopes and providing neutron beams for research.

Talks given at the last few meetings, and those to be given at the next few meetings of the combined technical program of the ANA and Engineers Australia, are as follows:

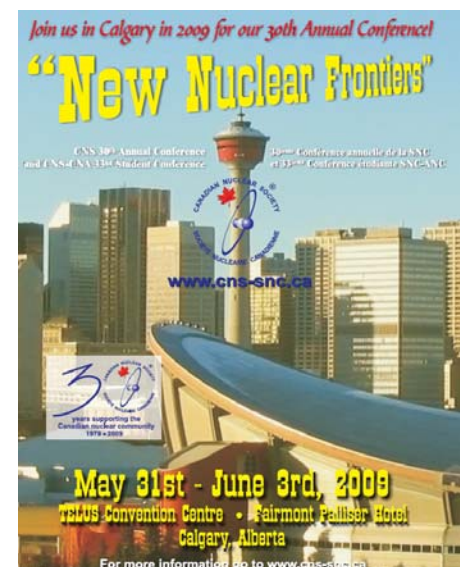
- 2008 August 28, [Dr. Clarence Hardy](#), ANA, “Progress on Small and Medium Reactors”
- 2008 September 24, [Dr. Steve Gower](#), Australian Synchrotron Project Melbourne, “The Australian Synchrotron”
- 2008 October 23, [Mr. Ian Turner](#), ARI, ANSTO, “Mini-Cyclotrons and PET in Australia”
- 2008 November 26, [Prof. V.G. Agelidis](#), University of Sydney, “Nuclear Education”.

- [Canadian Nuclear Society \(CNS\)](#) (<http://www.cns-snc.ca>)

Canada hosted the World Nuclear University’s Summer Institute 2008 at the University of Ottawa from July 6 to August 15. This was the 4th Summer Institute, and was extremely successful. WNU Fellows from more than 30 countries received presentations on a wide variety of nuclear issues, engaged in team-building and leadership exercises, and set up a global network of future leaders in the international nuclear industry. Some of the Fellows created a Resolution outlining the challenges facing the industry, as well as a pledge to continue the spirit of international co-operation developed over the six weeks of the Summer Institute.

The Canadian nuclear industry is currently experiencing a very high level of activity, including proposals for new build in the Province of Ontario and refurbishment activities for two reactors at the Bruce Nuclear Generating Station and for the Point Lepreau reactor in New Brunswick. The Province of Québec also recently approved the future refurbishment of the Gentilly-2 Nuclear Generating Station.

The CNS’s 30th Annual Conference, 2009 May 31-June 3, “New Nuclear Frontiers” will be its first held in Calgary, Alberta.



- [French Local Section \(http://local.ans.org/france\)](http://local.ans.org/france)

PRESIDENT BURCHILL'S VISIT TO FRANCE AND GENERAL ASSEMBLY

Following tradition, the French Section invited ANS President [William Burchill](#) to its General Assembly held on October 3 in Paris. On this occasion, [Professor Burchill](#) gave a presentation, “**Solving the Manpower Challenge to Sustain the Nuclear Renaissance**”, to a large audience which included in particular many young nuclear engineers and students as well as senior executives from French nuclear research and industry, representatives from ministries, the US Embassy in Paris, the French-American Foundation and international agencies.



In addition to [President Burchill's](#) lecture and [President Grenèche's](#) French Section Annual Report, two items of the agenda were devoted to the **Young Generation**:

- Two lively reports presented “in duo” by two young French students, [Aurelia Estève](#) and [Alice Soulié](#), from the “Ecole Normale Supérieure des Mines de Paris”, regarding their Summer internship at the Idaho National Laboratory. They explained to the audience how interesting and fruitful was this human and scientific experience of getting involved in such prestigious laboratories.

During his visit to France, [President Burchill](#) met with the French Section Board in order to review the relationship between the ANS and the Section, and to discuss how to enhance the international role of the Society in the framework of the current ANS Strategic Planning process.

His program also included a meeting with [Mrs. Palacio](#), AREVA senior Vice-President (and past Spanish Minister for Foreign Affairs) and a technical visit to the MELOX plant for MOX fuel fabrication, specially organized for him with the participation of AREVA senior executives

2008 TECHNICAL TOUR IN FRANCE FOR US ENGINEERING PROFESSORS

Following the previous six successful technical tours of French nuclear facilities organized by the French Section for US nuclear engineering professors, the seventh technical tour took place from **July 6 to 12** under the leadership of [Dominique Grenèche](#), the French Section's Chair (from AREVA) in connection with his American counterpart, [Brian Hajek](#) from Ohio State University.

Twelve professors from eleven different universities (Duke, Georgia Tech, Idaho, Michigan, Missouri-Columbia, Missouri-Rolla, Ohio, Texas A&M, North Texas, North Carolina and South Carolina) followed a very intensive program including special nuclear visits across the country: Starting at CEA Saclay Research Center where they had an overview of the French nuclear R&D and industry by AREVA, CEA and EDF senior executives, this tour led them to Provence at Marcoule and the Melox facility (MOX fuel fabrication), the CEA ATALANTE facility - main hot laboratories for research on advanced fuel cycles and the new Visiatome Nuclear Information Center. Near Lyon

they went to the AREVA large component fabrication facility in Chalon, where they were able to see the fabrication of large components, such as Steam Generators. Regarding waste management in France, two major sites were planned: the Aube Low Level Waste Disposal Facility at Soulaïnes and the Bure Underground Research Laboratory, both within ANDRA, the National Radwaste Management Agency. Then, heading West, they went to the AREVA La Hague Plant and to Flamanville, where the first French EPR is under construction.



The US Professors at La Hague - From left to right: Mitty Plummer (University of North Texas), Jeff King (Missouri University of Science & Technology), the AREVA guide, Man-Sung Yim (North Carolina State University), David Boyle (Texas A&M University), Susan Sterett (Duke University), Michel Debès (EDF), Brian Hajek (Ohio State University), William Wepfer (Georgia Tech University), Paul Murray (AREVA Inc.), Patrick Pinhero (University of Missouri Columbia), Travis Knight (University of South Carolina), Mary Lou Gougar (Senior Consultant/Idaho State University), Michael Lineberry (Idaho State University), Ron Gilgenbach (University of Michigan) & Dominique Grenêche (SFANS).

A few quotations from the professors' letters of thanks:

"It was a completely unique experience in my lifetime..." - Michael Lineberry, Idaho State University.

"The information and experience gained in France will be invaluable for future nuclear

engineering teaching and research in US universities” - Ron Gilgenbach, University of Michigan.

“I would like to build a student exchange between our programs and yours”- Travis Knight, University of South Carolina.

INTERNATIONAL CONFERENCES

As is the case each year, a great number of Section members have been and are directly involved in the sponsorship and organization of ANS Topical Meetings and periodic international conferences. For instance, several French nuclear experts were involved in the successful meeting ICAPP 2008 (International Congress on Advances in Nuclear Power Plants) held in Anaheim in conjunction with the ANS Annual Meeting. Moreover, a major project is the ongoing organization of **GLOBAL 2009/Topfuel 2009**, scheduled to be held in Paris on **6-10 September** and focusing on **“The Nuclear Fuel Cycle: Sustainable Options and Industrial Perspectives”**: [Bernard Bigot](#), French High Commissioner for Nuclear Energy is General Chair, and [Dominique Grenèche](#) (AREVA), the French Section’s Chair is Technical Program Chair.

YOUNG NUCLEAR ENGINEER AWARDS

The French Section has opened this award selection to French PhD students working in nuclear research laboratories at AREVA, CEA and EDF and interested in participating in ANS Topical or Annual Meetings to be held in the US.

The first Young Nuclear Engineer Award was presented to [Johan Autunes](#) who has just graduated, ranking first, from the French Institute for Nuclear Science and Technology. He will select an ANS Meeting to be held in the US and the grant will support his travel expenses, registration fee and accommodations during the meeting.

The second awardee, invited at the General Assembly as well, was [Pierre Laghoutaris](#), a PhD student working at the CEA Saclay Research Center.

INTERNATIONAL STUDENT EXCHANGE PROGRAM

Three French students, [Aurelia Estève](#) and [Alice Soulié](#), from *Ecole des Mines de Paris*, and [Damien Lebrun-Grandié](#), from the Grenoble Polytechnic Institute (National Engineering School of Physics), have been sponsored by the French Section for their 3-month internship at Idaho National Laboratory during Summer or Fall.

NEWSLETTER AND WEBSITE

The French Section publishes its periodical Newsletter [SF@NS.news](#), which is sent out by e-mail to its members, and in outreach to readers interested in American-French nuclear relations. It aims to give more specific and updated information on nuclear power development in the US and highlight major events regarding ANS international strategy and relevant French Section actions.

In addition, a special **French Section homepage on the ANS website/International Section** is dedicated to French nuclear news and SFANS projects, and to posting [SF@NS.news](#) issues.

THE FRENCH SECTION

The French Section has a membership of nearly 250 experts, representing, at a high level, government agencies, such as the Atomic Energy Commission (CEA), the national utility (Electricité de France) and the Areva Group with corporations involved in power plant engineering and construction (Areva NP), the fuel cycle (Areva NC) and research reactors (Technicatome). The ANS local section is an integral group of the larger French Nuclear Energy Society (SFEN) and is acting as the international group of the national society, in charge of relationship with America. Furthermore, several members of the Section are involved, as Board member, Chair and executives, in National Standing Committees and Professional Divisions of the ANS.

THE NEW BOARD

Chair : [Dominique GRENECHE](#) / Areva
Vice-Chair : [Jean-Claude GAUTHIER](#) / Areva NP
Secretary : [Jean-Claude YAZIDJIAN](#) / Areva NP
Treasurer : [Jean-Paul CHABARD](#) / EDF

Board Members: [Franck BOCQUET](#)/Areva NP, [France BRES-TUTINO](#),
[Rosine COUCHOUD](#)/Foreign Affairs Ministry,
[Michel DEBES](#)/EDF, [Jacques de la FERTE](#),
[Edouard HOURCADE](#)/CEA, [Alain KAVENOKY](#)/CEA,
[Richard SANCHEZ](#)/CEA, [Boris SUPIOT](#)/Areva NP,
[Bernard JOLLY](#)/SFEN, [Dominique WARIN](#)/CEA,
[Pascal YVON](#)/CEA.



President Burchill with the French Section's new Board. From left to right: Michel Debès, France Brès-Tutino, President Burchill, Alain Kavenoky, Dominique Grenèche (Chair), Jean-Claude-Gauthier (Vice-Chair), Rosine Couchoud, Jean-Claude Yazidjian (Secretary General) and Jacques de la Ferté

- [India \(http://www.ins-india.org\)](http://www.ins-india.org)

News reached *The ANS Globe* of the passing on August 31, 2008, of Dr. Placid Rodriguez, Past President of the Indian Nuclear Society (INS). On behalf of *The ANS Globe*, sincerest condolences to the family of Dr. Rodriguez and to the Indian Nuclear Society.

The INS Awards Committee has conferred a large number of Awards for the year 2007, in particular:

INS HOMI BHABHA LIFETIME ACHIEVEMENT AWARD to

- [Dr. Satinder Kumar Sikka](#), Scientific Secretary, Office of the Principal Scientific Advisor to the Government of India & Former Director, Atomic & Condensed Matter Physics Group, BARC, and
- [Shri A. Sanatkumar](#), Former Sr. Executive Director (Operations & Technical Training), NPCIL

INS EMINENT SCIENTIST AWARD to

- [Dr. M. Georges Vendryes](#), Honorary Executive Vice-President, French Atomic Energy Commission

- [Atomic Energy Society of Japan](#)

The Japan Atomic Industrial Forum, Inc. (JAIF) and the Atomic Energy Society of Japan (AESJ) hosted the 16th Pacific Basin Nuclear Conference (PBNC) and technical exhibition under the auspices of Pacific Nuclear Council (PNC) on October 13-19, 2008 in Aomori, Japan. The Conference theme was “Pacific Partnership toward a Sustainable Nuclear Future”. Aomori, one of the world’s advanced nuclear technology centers, is located in the northern part of Honshu (the main island of Japan). It is one of the world’s advanced nuclear technology centers. The 16th PBNC attracted 700 participants and was very successful.

- [Korea Local Section](#)

The new officers for the Korea Local Section of the ANS for the period July 2008-June 2009 are as follows.

Chair: [Kune-Yull Suh](#), Professor, Seoul National University

Vice Chair: [Tae-Woo Kim](#), Vice President, Doosan Heavy Industries & Construction Co., Ltd.

Treasurer: [Myung-Seung Yang](#), President, Korea Atomic Energy Research Institute

Secretary: [Joo-Ho Whang](#), Professor, Kyung Hee University

Executive Committee:

[Maeng-Hyun Yoon](#) (KNFC), [Byung-Ro Kim](#) (KNEF),
[Jin-Sik Kim](#) (KEPCO), [Jong-Keun Yoon](#) (KHNP)

[Myung-Jae Song](#) (KHNP), [Young-Suk Hur](#) (KOPEC)
[Eui-Seung Park](#) (Daewoo E&C), [Young-Il Lee](#) (Samsung)
[Heung-Kyun Park](#) (DIC), [Moo-Sung Jae](#) (Hanyang Univ.)
[Chul-Ho Yoon](#) (KINS), [Poong-Hyun Seong](#) (KAIST)
[Seung-Bong Yoo](#) (KPS), [Jin-Seoub Song](#) (HECC)
[Tae-Huan Lyu](#) (KAIF)

The ANS Korea Section holds nuclear-community breakfast meetings on a regular basis. Each meeting is accompanied by a keynote speech. For example, the speech at the latest communicated breakfast meeting (2008 July 4) was given by [Dr. Yuri Sokolov](#), Deputy Director General, IAEA, and was titled “IAEA Role in Support of Launching a Nuclear Power Program”.

- [Malaysia](#)

[Dr. Nahrul Khair](#), President of the Malaysian Nuclear Society (MNS), invites all ANS members to the International Nuclear Conference, INC’09, which will be held in Kuala Lumpur 2009 June – July 1. The theme of INC’09 is “Strengthening Partnership in Nuclear Energy”. For further information, e-mail inc09@nuclearmalaysia.gov.my.

The Malaysian Nuclear Society’s activities include:

- Education (seminars, conferences, student outreach)
- Annual publication of the Nuclear Bulletin of Malaysia
- Publication of the international scientific journal “Journal of Nuclear and Related Technology”
- Awarding of prizes to outstanding students



- [Sociedad Nuclear Mexicana](#)

Past President of the Sociedad Nuclear Mexicana [Juan-Luis François](#) sends the following report:

On July 6-9, 2008, the Mexican Nuclear Society (SNM) celebrated its 20th anniversary at its 19th annual meeting in the beautiful city of Mérida, Yucatán in México. The conference was inaugurated by the Governor of Yucatán, accompanied by the mayor of Mérida, and the chancellor of the University of Yucatán, among others. The politicians gave moving speeches and they warmly invited the attendees to enjoy the people, the culture, the arts and crafts, the history, and the cuisine of the Yucatán state. They concluded that the descendants of the Mayans, the ancient architects and astronomers, appreciate the work that was to be done during the following days on nuclear energy



and its applications. The plenary sessions featured renowned speakers, including: [Dr. Luis Echávarri](#), NEA/OECD, [Dr. Frank Carré](#), CEA/France, [Dr. Kazuaki Matsui](#), director of IAE/Japan, [Dr. William Burchill](#), ANS President (in photo) and [Dr. David Chichester](#), INL researcher.

The more than 100 attendees enjoyed three days of technical sessions, where several sessions were dedicated to presentations about recent challenges at the two-BWR-unit Laguna Verde Nuclear Power plant and the current power uprate, ongoing research at the Mexican universities and research institutions. A total of 80 technical papers were presented, 19 of which were by students.

- [OECD Nuclear Energy Agency \(http://www.nea.fr\)](http://www.nea.fr)

(Gleaned from the NEA's Monthly Electronic Bulletin)

To celebrate its 50th Anniversary, the NEA is currently preparing its first *Nuclear Energy Outlook* (NEO). The NEO will respond to the changing dynamics and renewed interest in nuclear energy and will arrive at a moment when energy security, climate change and the cost of energy have become priorities in both short-term and long-term energy policies. Using the most current data and statistics available, the NEO will provide projections up to 2050 to consider growth scenarios and potential implications on the future use of nuclear energy. It will compile information in new and innovative ways using simple terms. It will also offer unique analyses and recommendations on the possible challenges that lie ahead. It will be released on 16 October 2008.

The NEA has prepared a new report on market competition in the nuclear industry which will be published shortly. The structural changes and consolidation which have taken place in both the producer and consumer sides of the nuclear industry since the 1980s have had an impact on the level of competition in the supply of materials and services required to build, operate and fuel nuclear power plants. The study, the first by the NEA on this topic, develops a methodology for assessing each market sector by considering a set of ten market characteristics which act as indicators of competitiveness. With renewed expansion of nuclear power now anticipated, the study assesses both present and projected future levels of competition in the main market sectors.

The list of NEA meetings and conferences for which NEA co-sponsorship or co-operation has been granted is available on the NEA website at www.nea.fr.

- [Pacific Nuclear Council \(http://www.pacificnuclear.org\)](http://www.pacificnuclear.org)

At the close of the 16th Pacific Basin Nuclear Conference in Aomori, Japan, 2008 October 17, [Prof. Chan-Sun Kang](#) of Korea, Vice-President and President-Elect of the Pacific Nuclear Council (PNC), succeeded [Dr. Clarence Hardy](#) of Australia in the position of President of the PNC, while Dr. Juan-Luis Francois of Mexico was elected

as the new Vice-President and President-Elect.

In 2010 October, the 17th Pacific Basin Nuclear Conference will be hosted in Cancún by the Sociedad Nuclear Mexicana.

- [Nuclear Society of Russia \(NSR\)](#)

[Sergey Kushnarev](#), Executive Vice-President of the Nuclear Society of Russia, has advised that [Dr. Ivan I. Fedik](#) (SPA Luch, Podolsk) is the current President of NSR, and [Dr. Stanislav Antipov](#) is the Past President.

The NSR held a Conference on 10-12 September 2008 in Moscow on “Human Resources for Nuclear Industry Development”, which featured the critical topics of nuclear education, personnel training, preservation and transfer of nuclear knowledge, etc.

The Nuclear Society of Russia is now preparing to celebrate its 20th anniversary. Warmest congratulations to the NSR from *The ANS Globe!*

- [Nuclear Society of Slovenia \(http://www.nss.si\)](http://www.nss.si)

[Dr. Boštjan Končar](#), President of the Nuclear Society of Slovenia (NSS), sent the following report.

In Portoroz, on 2008 September 8-10, a very successful annual nuclear meeting (NENE 2008) was held, with more than 220 participants from 25 countries. The NSS is already working hard in preparing its next annual conference, “Nuclear Energy for New Europe 2009” (NENE 2009), which will be held 2008 September 14-17, in the alpine resort of Bled (www.nss.si/bled2009/). Just recently, on 2008 September 9, the NSS organized a public roundtable, “Nuclear Energy for Sustainable Development”, with panelists from France, Belgium, Germany and Slovenia. Another public round table, “Nuclear energy today and tomorrow”, was organized by the Young Generation section of NSS in March 2008. In addition, NSS organizes or supports technical lectures and seminars. The Society has also co-organized a contest for graduate students for the best work in the field of power engineering. The awards for the best 3 works are scheduled to be awarded in October 2008.



- [Swiss Nuclear Society \(http://www.sns-online.ch\)](http://www.sns-online.ch)

[Dr. Ingeborg Hagenlocher](#) provided the following report, which was tabled at the Anaheim meeting.

The Swiss Nuclear Society (SNS) & the Swiss Nuclear Forum are celebrating their 50th birthday! The Paul Scherrer Institute (PSI) is celebrating its 20th! (EIR, the Swiss Institute for Reactor Research, founded in 1960, and SIN, the Swiss Institute of Nuclear Physics, founded in 1968, merged in 1988 to form PSI.) Together, SNS and PSI organized the PHYSOR 2008 ANS Topical Meeting in Reactor Physics (Interlaken, September 14-19).

And the Young Generation branch of SNS is celebrating its 10th anniversary! It hosted IYNC, the International Youth Nuclear Congress (Interlaken, September 20-26).

On a personal note, [Dr. Hagenlocher](#) is now in Heidelberg, working on many activities in the ITER Business. [Dr. Hagenlocher](#) is a member of the European Nuclear Society High Scientific Council.

- [Taiwan Local Section](#)

Secretary [Yeousong Tsay](#) of the Taiwan Local Section sends this report:

The Executive Committee of the ANS Taiwan Section held a meeting on September 18, and [Dr. Tai-Ming Chiu](#), Deputy Director General of the Institute of Nuclear Energy Research (INER), became the new Chair of the Section. The new secretary is [Mr. Wei-Whua Loa](#).

At the time of this writing, the ANS-TS is awaiting a visit from ANS President [William E. Burchill](#) in the second half of October. There will be a welcome dinner, which will also serve as a “Meet the Section” event. In addition to Executive and Supervisory Committee members, members and students are expected to attend. [President Burchill's](#) visit will give Taiwan's young generation a chance to listen to the leader of nuclear energy in the international arena and hear his opinion on the future of nuclear energy, plus a chance to talk with him face to face. President Burchill will also visit the Institute of Nuclear Energy (INER), and in the afternoon he will visit the Atomic Energy Council and meet with [Chairman Minister Tsai](#). The ANS-TS would appreciate a one-hour talk in AEC on the issues of development trends, opportunities and challenges for nuclear energy in the future, the education of nuclear professionals and their job opportunities. In the evening, [Minister Tsai](#) will hold a dinner party for [President Burchill](#).

- [United Kingdom](#)

Former IC member [Philip Beeley](#) forwarded the following announcement by John Earp, President of BNES, and David Whitworth, President of INuCE, regarding the merger of these organizations.

[The Nuclear Institute](#)

As you may be aware, the Nuclear Institute is being formed from the merger of the

British Nuclear Energy Society (BNES) and the Institution of Nuclear Engineers. This letter is to inform you of the benefits that your professional engineers and scientists can expect from the new Institute and to request your support to promote the New Institute.

Background

The Institution of Nuclear Engineers (INuCE) was founded in 1959 and is the leading UK body for gaining professional recognition for personal nuclear expertise and is a Learned Society. It is a licensed member of the Engineering Council (UK), a registered charity and a company limited by guarantee. The INuCE has 1,000 individual members and has operated a scheme for company members (known as Corporate Partners) for several years. It has branches in the UK and one in South Africa.

The British Nuclear Energy Society (BNES) was founded in 1962 and is a Learned Society and a registered charity. The original trustees were two representatives of each of the constituent professional institutions. The BNES has 1,500 individual members and it also operated a company member scheme targeted at a slightly different group of companies from the INuCE scheme. BNES is a member of the European Nuclear Society (ENS) and hosts the UK's (YGN), an initiative promoted in the late 1990's by ENS as a career development initiative for the industry.

The two organisations have been working closely together for several years, and the concept of a merger has been an aspiration for even longer because of the many areas and issues of common interest to both organisations. They both have very similar aims and charitable objects, with extensive activities as Learned Societies, such as education and training, publications, conferences, networking and knowledge sharing.

Over the last few years both organisations have made significant progress in this regard by integrating their activities at branch level and recently combining their two publications into a single journal. They also now operate a joint company membership scheme and a joint secretariat with a single Executive Secretary. The organisations have been invited to make and have made several joint presentations to Parliamentary Select Committees, demonstrating the respect in which their views are held. This leads to the obvious conclusion that they should merge to form a new charity and company limited by guarantee.

The Vision for the Nuclear Institute is:

To be the primary source of impartial, authoritative information and professional recognition of nuclear engineering, science, and technological competence

It is important to public safety that a body exists to assess and give credible, authoritative public assurance that those who have supplemented their primary qualifications with suitable nuclear competence and experience are competent to practise as nuclear professionals. The New Institute will carry on this function.

...

In addition, the Nuclear Institute will provide authoritative, impartial nuclear advice and information for those who have no wish for professional recognition, but who require it.

Purpose

The Nuclear Institute will:

- Promote highest professional and safety standards for the nuclear industry.
- Aim to be the leading qualifying body for nuclear professionals.
- Provide impartial authoritative advice to government, industry and the wider public on nuclear science, engineering and technology.”

- Women in Nuclear Global (WIN Global)

Cheryl Boggess of Westinghouse has been elected President of WIN Global. WIN Global’s annual meeting in 2008 was held May 26-30 in Marseille, France. The theme of the Conference was “Nuclear Revival: Maintaining Key Competencies”. Experts, company executives, organisation leaders of all nationalities, women and men, convened to address the challenges facing the nuclear industry in the future. The programme offered a variety of presentations, and provided a broad analytical view of the nuclear industry. “Country reports” gave attendees the opportunity to assess the state of nuclear development at a global level, while more specific presentations addressed particular challenges.

- World Federation of Engineering Organizations

Jorge Spitalnik, Chair, WFEO Energy Committee, sent the following report:

The Report on Nuclear Power Feasibility has just been issued by the Energy Committee of the World Federation of Engineering Organizations (WFEO EC). This report can be freely downloaded from the WFEO webpage www.wfeo.org. This is the second report of the Series on Feasibility of Current Energy Options. The first report was on Wind Power Feasibility, also available on the WFEO webpage. The Series is intended to give the viewpoint of the engineering profession on questions related to technical and economic feasibility of energy issues, and to provide the engineer and decision making officers with updated information regarding the state-of-the-art of different energy technologies.

The World Engineering Convention, in a partnership among WFEO, CONFEA, FEBRAE and UNESCO, will take place 2008 December 3-5, in Brasilia, Brasil. The focus of this event will be the world in development and its challenges. The theme selected is “Engineering: Innovation with Social Responsibility”.

- [World Nuclear University](#)

The World Nuclear University's Fifth Annual Summer Institute will be held at the University of Oxford, England, 2009 July 5 - August 15.

News from ANS Divisions

To further the implementation of the Joint Protocol between the International Committee and the Professional Divisions Committee, we are pleased to include in the Globe some newsworthy items relating to ANS Divisions.

- [Education and Training Division \(ETD\) \(<http://etd.ans.org>\)](#)

The Division is looking forward to CONTE 2009 (see Calendar of Events below), the Conference on Training and Education, which is an excellent opportunity to meet, exchange information, and discuss issues common to continuing efforts to maintain excellence in human performance at nuclear facilities. The theme for CONTE 2009 is "Education, Training and Workforce Development - The Global Path to the Nuclear Energy Future".

- [Human Factors, Instrumentation, & Controls Division \(HFICD\) \(<http://hficd.ans.org>\)](#)

At the ANS Board meeting of 2008 June 12, the name of the old Human Factors Division was changed to Human Factors, Instrumentation, & Controls Division (HFICD). The Division website's URL has been updated.

- [Mathematics and Computation Division \(MCD\) \(<http://mcd.ans.org>\)](#)

MCD is hard at work organizing the 2009 International Topical Conference on Advances in Mathematics, Computational Methods, and Reactor Physics, scheduled to be held 2009 May 3-7 in Saratoga Springs, NY (see Calendar of Events below).

- [Reactor Physics Division \(RPD\) \(<http://rpd.ans.org>\)](#)

Following PHYSOR-2008, held 2008 September 14-19 in Interlaken, Switzerland, the next two Reactor Physics Topical meetings organized by RPD are:

- Advances in Nuclear Fuel Management, Hilton Head, SC, 2009 April 12-15, and
- PHYSOR-2010, to be held in Pittsburgh, PA

- [Environmental Sciences Division \(<http://esd.ans.org>\)](#)

The ESD selected [Prof. Bernard Cohen](#) of the University of Pittsburgh as the winner of the 2008 W. Bennett Lewis Award, established in 2006 by the ESD. Prof. Cohen

was selected in recognition of his major lifetime contributions in nuclear science and engineering towards attaining long-term global sustainable energy and development. This award is scheduled to be presented at the ANS Awards Luncheon on Tuesday, November 11, 2008, during the ANS Winter Meeting in Reno, NV. Congratulations from *The ANS Globe* to Dr. Cohen!

Highlights from the 2008 June Anaheim Meeting

Two major presentations were made to the meeting of the ANS International Committee in Anaheim. A “digest” of these presentations is reproduced here.

Presentation on “IAEA and Developing Countries”, by Atam Rao, Head, Nuclear Power Technology Development, IAEA

Nuclear power use to expand and grow

- Currently 30 countries operate 439 NPPs with total capacity of 372 GWe
- Ambitious expansion plans in China, India, Russia
 - China to add 40 GWe of water reactors by 2020
 - India planning 250 GWe of fast reactors by 2050
- Confidence in nuclear operation up
- 40 countries are considering or planning a new plant
- IAEA Projections (in 2007) for 2030 indicate
 - High Estimate : 691 GWe in operation with 20 newcomers
 - Low Estimate; 447 GWe in operation with 8 newcomers
- Driven by fossil price, energy security, climate change
- For developing countries (ex. China & India)
 - 80% of new plants will be in 25% of countries



What users want & what suppliers want

- Advanced yet proven technology
- Proven supply team
- Must meet financial goals
 - Low generation cost
 - Manageable project risks
- Established infrastructure




Considerations to Launch a Nuclear Power Program

3 MAJOR PHASES (10 to 15 years)

1. Considerations before a decision to launch a nuclear power program is taken (1-3 years)
2. Preparation work for the construction of a NPP after a policy decision has been made (3-7 years)
3. Activities to implement the first NPP (3-6 years)




Milestones in the Development of a National Infrastructure for Nuclear Power

• National position	• Stakeholder involvement
• Nuclear safety	• Site and supporting facilities
• Management	• Environmental protection
• Funding and financing	• Emergency planning
• Legislative framework	• Security and physical protection
• Safeguards	• Nuclear fuel cycle
• Regulatory framework	• Radioactive waste
• Radiation protection	• Industrial involvement
• Electrical grid	• Procurement
• Human resources development	



IAEA Assistance to Newcomers

Capacity building and mobilization of international experts in

- Review feasibility study
- Review draft nuclear law
- Regulatory framework and organization
- Site survey, site evaluation, site selection
- Human resources development plan
- Bid tendering and evaluation
- Technology assessment
- Owner/Operator's competence building
- Regulator's competence building

What IAEA cannot do

- Assess and compare NPP designs for selection
- Work beyond limitation of resources (human and financial)
- Make and implement decisions



Identifying what developing countries wanted

- Study:
 - 54 countries identified
 - 200 experts from 35 countries participated in report development
- Observations:
 - Strong degree of commonality
 - Few areas of divergence
 - Interest in water cooled reactors

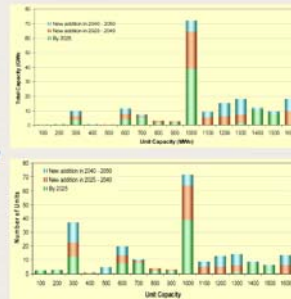


54 countries addressed by the project have 2 attributes – they are developing countries and are interested in potential use of nuclear energy systems



What developing countries said

- Countries' expectations:
- New capacity :
 - 85% from NPPs > 1000MW
 - 15% from NPPs < 700 MW (SMRs)
- Number of units:
 - 65% of new units > 1000MW
 - 35% < 700 MW
 - Grid Size and Stability -- limiting factors
- Total growth more optimistic than IAEA projections



Some other developing country requirements

- Opportunity to improve national capability
- Proven technology
- Transfer of operating experience
- **Same level of safety, security and proliferation resistance as in Technology-Holder countries**
- Support for financing, risk allocation
- Less uncertainty in cost data
- Help from regulators & organizations
- **Assured operation (fuel, parts, service, know-how)**
- Spent fuel cooperation and take-back option



Presentation on the OECD's Nuclear Energy Agency, by Janice DUNN LEE, NEA Deputy Director-General



Agence pour l'énergie nucléaire
Nuclear Energy Agency



NUCLEAR ENERGY IN OECD COUNTRIES

- More than 300 GWe providing ~ 25% of electricity supply
- More than 9 000 reactor-years of operating experience
- Large, diversified industrial sector
- Robust R&D infrastructure
- Highly qualified manpower

ANS International Committee, Anaheim, 8 June 2008
2



Agence pour l'énergie nucléaire
Nuclear Energy Agency



OECD Membership Activities

- **Accession**
 - Chile, Estonia, Israel, Slovenia, and the Russian Federation
- **Enlargement**
 - Brazil, China, India, Indonesia, and South Africa



ANS International Committee, Anaheim, 8 June 2008
3


 Agence pour l'énergie nucléaire
 Nuclear Energy Agency
 

Relations with China

- Nuclear Safety MOU
- Negotiate broader agreement

4


 Agence pour l'énergie nucléaire
 Nuclear Energy Agency
 



QUALIFIED HUMAN RESOURCES

2007 NEA Steering Committee Statement

➤ Key Elements

- Nuclear energy characterised by long time horizons
- Concern in recruiting qualified specialists
- Risk of shortage to ensure regulation and operation of existing facilities as well as construction of new ones
- Decrease in government funding for research
- Governments role in assessing availability, enhancing education, supporting university and encouraging R&D



5


 Agence pour l'énergie nucléaire
 Nuclear Energy Agency
 


50TH ANNIVERSARY OF THE NEA

- 16 October 2008
- History booklet
- Nuclear Energy Outlook

7


 Agence pour l'énergie nucléaire
 Nuclear Energy Agency
 

NEA Committees



9

Young-Generation Corner

IYNC2008, the Fifth International Youth Nuclear Congress, was held September 20-26, 2008, in Interlaken, Switzerland, immediately following PHYSOR-2008.

Societies with Collaboration Agreements with ANS

The following is a list of nuclear societies with collaboration agreements with the ANS, along with the corresponding website addresses. The Table contains also a few other entries of interest to ANS International Committee members.

Society	Website or E-Mail Address
Asociación Argentina de Tecnología Nuclear	-
Associação Brasileira de Energia Nuclear	www.aben.com.br
Association des Ingénieurs en génie atomique du Maroc	-
Atomic Energy Society of Japan	wwwsoc.nii.ac.jp/aesj/index-e.html
Australian Nuclear Association	www.nuclearaustralia.org.au
Bangladesh Nuclear Society	-
British Nuclear Energy Society	www.bnes.com
Bulgarian Nuclear Society	www.bgns.bg

Canadian Nuclear Society	www.cns-snc.ca
Chinese Nuclear Society	www.ns.org.cn
Croatian Nuclear Society	hnd.zvne.fer.hr
Czech Nuclear Society	www.csvts.cz/cns
European Nuclear Society	www.euronuclear.org
Hungarian Nuclear Society	www.kfki.hu/~hnucsoc/hns.htm
Indian Nuclear Society	www.indian-nuclear-society.org.in
Israel Nuclear Society	meins@tx.technion.ac.il
Korean Nuclear Society	www.nuclear.or.kr/e_introduce.php
Lithuanian Energy Institute	www.lei.lt
Malaysian Nuclear Society	www.mint.gov.my/mns
Nuclear Energy Society of Kazakhstan	www.nuclear.kz
Nuclear Energy Society of Russia	ns@kia.ru
Nuclear Energy Society of Slovenia	www.drustvo-js.si
Nuclear Energy Society of Thailand	www.nst.or.th
OECD/Nuclear Energy Agency	www.nea.fr
Polish Nuclear Society	www.ptn.nuclear.pl
Romanian Nuclear Energy Association	www.aren.ro
Romanian Society for Radiological Protection	www.ispb.ro/rsrp.htm
Slovak Nuclear Society	www.nuc.elf.stuba.sk
Sociedad Nuclear Española (SNE)	www.sne.es
Sociedad Nuclear Mexicana	www.sociedadnuclear.org.mx
Ukrainian Nuclear Society	www.ukrns.odessa.net
Women in Nuclear – Global	www.win-global.org
Affiliated National Societies	Website or E-Mail Address
Belgian Nuclear Society	www.bns-org.be
Associated Nuclear Organizations	Website or E-Mail Address
International Nuclear Societies Council	http://insec.dyndns.org
Pacific Nuclear Council	www.pacificnuclear.org
Non-U.S. Local Sections	Website or E-Mail Address
Austrian Section	
French Section	http://local.ans.org/france/
Italian Section	
Japanese Section	
Latin American Section	www.las-ans.org.br
Korean Section	
Swiss Section	
Taiwan Section	u805301@taipower.com.tw

Calendar of Events

Some Upcoming International Conferences on Nuclear and Related Topics
(Please send us information about your upcoming conferences, for inclusion in this space.)

2008

- 2-4 November: 23rd Nuclear Simulation Symposium, Ottawa, Ontario, Canada – <http://www.cns-snc.ca>
- 9-13 November: ANS Winter Meeting, Reno, NV, USA – <http://www.ans.org/meetings>
- 16-18 November: 8th CNS International Conference on CANDU Maintenance, Toronto, Ontario, Canada – <http://www.cns-snc.ca/CMC2008.html>
- 3-5 December: World Engineering Convention, Brasilia, Brasil - organized by WFEO, CONFEA, FEBRAE and UNESCO – <http://www.wec2008.org.br>

2009

- 5-9 April: 6th American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Controls, and Human Machine Interface Technology, Knoxville, TN, USA – <http://www.ans.org/meetings>
- 19-22 April: Advances in Nuclear Fuel Management IV, Hilton Head Island, SC, USA – <http://www.ans.org/meetings>
- 3-7 May: M&C Topical: 2009 International Conference on Advances in Mathematics, Computational Methods, and Reactor Physics, Saratoga Springs, NY, USA – <http://www.ans.org/meetings>
- 10-14 May: 2009 International Congress on Advances in Nuclear Power Plants (ICAPP 09), Tokyo, Japan – <http://www.icapp09.org>
- 12-14 May: 11th Annual Electric Power Conference & Exhibition, Rosemont, IL, USA – <http://www.electricpowerexpo.com> – organized by TradeFair Group
- 31 May - 3 June: 30th Annual Conference of the Canadian Nuclear Society and 33rd CNS/CNA Student Conference, Calgary, Alberta, Canada – <http://www.cns-snc.ca>
- 14-18 June: ANS Annual Meeting, Atlanta, GA, USA – <http://www.ans.org/meetings>

- 22-24 June: FISA-2009 Conference, “EURATOM Research and Training in Reactor Systems”, Prague, Czech Republic, organized by the EC Directorate-General for Research - http://cordis.europa.eu/fp7/euratom-fission/events_en.html
- 29 June – 1 July: INC’09, “Strengthening Partnership in Nuclear Energy”, Kuala Lumpur, Malaysia; contact: inc09@nuclearmalaysia.gov.my.
- 29 June –3 July: ICENES-2009, 14th International Conference on Emerging Nuclear Energy Systems, Ericeira, Portugal, <http://www.itn.pt/icenes2009/> - organized by ITN (the Nuclear and Technology Institute, Sacavém, Portugal) and IPFN (Institute of Plasma and Nuclear Fusion, Lisbon).
- 12-17 July: The Twelfth Quadrennial International Conference on Fracture (ICF12), Ottawa, Ontario, Canada - <http://www.icf12.com>
- 6-11 September: GLOBAL 2009, Paris, France – <http://www.sfen.fr> (see under “International Events”); contact: Sylvie Delaplace, global2009@sfen.fr.
- 14-17 September: “Nuclear Energy for New Europe 2009” (NENE 2009), Bled alpine resort, Slovenia – organized by the Nuclear Society of Slovenia (<http://www.nss.si/bled2009/>).
- 15-19 November: ANS Winter Meeting and Nuclear Technology Expo, Washington, DC, USA – <http://www.ans.org/meetings>

2010

- 30 May-2 June: 31st Annual Conference of the Canadian Nuclear Society and 34th CNS/CNA Student Conference, Montréal, Québec, Canada
- May: International Conference on Nuclear Data for Science and Technology (ND-2010), Jeju, Korea – <http://www.nd2010.org>
- 13-17 June: ANS Annual Meeting, San Diego, CA, USA – <http://www.ans.org/meetings>
- 24-29 October: 17PBNC, 17th Pacific Basin Nuclear Conference, Cancún, México; organized by Sociedad Nuclear Mexicana
- 14-18 November: ANS Winter Meeting and Nuclear Technology Expo, New Orleans, LA, USA – <http://www.ans.org/meetings>

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