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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. 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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Contents

From the ANS Vice-President/President-Elect

(For this issue, International Committee Chair France Brès-Tutino has ceded her foreword "From the Chair", which usually appears here, to ANS Vice-President/President Elect William E. Burchill's message.)

Dear friends in the international nuclear community,

It is my distinct honor and pleasure to have been asked to address you in this foreword to the 2008 May issue of "The ANS Globe." I am most happy to do so as I complete my term as ANS Vice-President/President-Elect and on the eve of my becoming ANS President at the close of the ANS Annual Meeting in early June.

I believe that now is the second time in the history of nuclear science, engineering, and technology (NSE&T) that it is imperative that there be extensive, open, and effective dialogue among all members of the international community concerning NSE&T applications. The first time was following U.S. President Dwight D. Eisenhower's landmark speech to the United Nations announcing the "Atoms for Peace Program." This program laid the foundation for many nations worldwide to gain the benefits and the responsibilities of applying NSE&T. We are now at a similar threshold as a renaissance of activity in nuclear power is taking place around the world.

The world is about to embark on a nuclear power construction program the magnitude of which could be unprecedented. Currently 30 countries worldwide operate 439 nuclear power plants (NPPs), and 34 new NPPs are under construction in 11 countries. The currently-operating NPPs were built beginning in the 1960s over a period of forty years. However, worldwide demand for electricity is projected to double by mid-century, and there is worldwide recognition and concern that meeting this increased demand with fossil fuels is unacceptable due to its environmental impact, principally global warming, as well as direct health impacts. Thus, aggressive plans for constructing new NPPs are being developed and announced; these indicate that the number of NPPs in the world will double by mid-century. And, the number could triple if the environmental benefits of NPPs become more widely understood.

Currently the largest NPP construction programs underway or announced are in China, India, Russia, South Korea, Pakistan, Japan, and the United States. Others having firm plans to build include Argentina, Brazil, Bulgaria, Czech Republic, Romania, Slovakia, and Slovenia. However, numerous countries that do not presently have NPPs have announced that they are planning or considering them; these include Egypt, Nigeria, Iran, Saudi Arabia, Bangladesh, Kuwait, Indonesia, Turkey, Vietnam, Bahrain, Oman, Jordan, Libya, Syria, the U.A.E., Qatar, and Yemen. Communications with all countries should address the importance of systemic issues such as construction and O&M infrastructure, independent regulatory authority, peer evaluations, and experience sharing.

During the construction and operation of the current fleet of NPPs, countries learned from one another through professional technical exchanges, formal technology transfers, commercial transactions, and operating experience sharing. This includes the extensive lessons learned from the Three Mile Island and Chernobyl accidents. The international nuclear community must continue and increase these communications. The ANS International Committee and the Societies with collaboration agreements with ANS (see Table further below in the Globe) play key roles in these communications.

I look forward to working together with you during my term as ANS President to establish the communications that I've outlined above. I also hope to meet as many of you as possible either during ANS meetings or during visits to your respective countries. Thank you for your support of ANS and the ANS International Committee and for your contributions of information to "The ANS Globe." These communications provide a unique opportunity to share experience among this important peer group.

With best regards,
William E. Burchill
ANS Vice-President/President-Elect

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

- Austrian Section

  The Austrian Section of the ANS hosted an open discussion on 2008 January 23 at the Vienna International Centre. Invited Speaker Mr. Alan Mc Donald, a 25 year expert in global power projections and several global issues, made a presentation, with open discussion, on "Global Nuclear Power Deployment: What the Next 20 Years Will Bring".

- Canadian Nuclear Society (CNS) (http://www.cns-snc.ca)

  The Governing Council (Board of Directors) of the Canadian Nuclear Society has a mandate which runs from one June to the next. The incoming President and 1st Vice-

President for 2008 June to 2009 June are:

- President: Jim Harvie (Canadian Nuclear Safety Commission, retired) jdharvie@rogers.com
- 1st Vice-President: Dorin Nichita (University of Ontario Institute of Technology) eleodor.nichita@uoit.ca

2007-2008 President, Eric Williams (Bruce Power, retired) canoe.about@bmts.com becomes the Immediate Past President for 2008-2009

There is currently a very high level of activity in the nuclear industry in Canada:

- In early March 2008, the Government of the Province of Ontario asked four companies to submit proposals to build new nuclear power plants. The four companies are AREVA, Atomic Energy of Canada, GE Hitachi Nuclear Energy and Westinghouse Electric Co. The proposals will be examined by a large team including various government ministries, Ontario Power Generation and Bruce Power.
- Bruce Power has indicated that it wants to build a complex in the Peace River area of Alberta that could eventually generate 4,000 MWe. The first unit could start up as early as 2017, the company said. The regulatory process could take three years. No specific reactor design has been selected yet for the project. It will be chosen among several new-generation models.
- Refurbishment of plants for life extension: 2 reactors at the Bruce Nuclear Generating Station, as well as the Point Lepreau reactor in New Brunswick, are in refurbishment phases, to extend their useful life.

The Canadian Nuclear Society is also hosting this year the World Nuclear University's Summer Institute 2008, which will be held at the University of Ottawa from July 6 to August 15. WNU Fellows from more than 30 countries will be educated in a broad spectrum of nuclear energy issues, engage in team-building and leadership exercises, and become part of an expanding global network of future leaders in the nuclear profession.

• People's Republic of China

Ni Zhen, Master's student in the Department of Nuclear Engineering at Texas A&M University, sends the following report:

China's first nuclear plant (Qinshang phase no.1) started operating in 1993. China has now 6 nuclear power plants (with 11 units altogether) under commercial operation. Those operating plants include Qinshang phase no.1, no. 2 and no. 3, Dayawan phase no.1 and no.2, etc. Those operating units generate a total power of 9.068 GW. And there are 8 additional units with a total power of 7.90 GW under construction. Unit 1 of the Lingao phase no. 2 plant is scheduled for completion in 2010; it will most likely be China's next operating nuclear unit.

In October 2007, the Chinese government approved the "Middle and long term plan

for the development of nuclear power from 2005 till 2020". Some of the issues the plan addresses are:

- By 2020, all nuclear units under commercial operation will provide a total power of about 40 GW. And all these units will generate about 260 TWh to 280 TWh of electricity per year. This will require the construction of some additional units of total power output around 23 GW. This 15-year construction plan will require a total investment of around 450 billion RMB. A number of new units with a total power of 18 GW will be constructed after 2020.
- Right now, nuclear power contributes less than 2% of China's overall domestic electricity production. China aims to increase this share to 4% by 2020. Currently, over 80% of China's overall electricity production is generated through coal, resulting in SO_2 emissions in China of around 12 million tons per year. Further development of nuclear power will help China to improve the environment.
- China will continue to work with the closed-fuel-cycle technology. While constructing new nuclear units, disposal facilities for middle- and low-level radioactive wastes will be built in order to accommodate the potential increase in these two types of nuclear wastes. By 2020, final disposal facilities for high-level radioactive waste will be constructed as well.
- The nuclear units to be built before 2020 will be constructed mainly in the provinces located next to the Pacific Ocean, including Zhejiang, Guangdong, Fujian, Jiansu and Shangdong provinces.

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

VICE-PRESIDENT BURCHILL'S VISIT TO FRANCE AND GENERAL ASSEMBLY

Following tradition, the French Section invited the ANS President Doug Hintz to its General Assembly held in Paris on October 12, at the Club France-Amériques. The ANS President's busy planning could not allow him to travel to Europe in October, and ANS Vice-President William Burchill represented the ANS. On this occasion, Professor Burchill gave a presentation on **"The US Nuclear Renaissance and the Importance of the French Connection"** 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 Vice-President Burchill's lecture and President Carré's French Section Annual Report, three items on the agenda were devoted to the **Young Generation:**

- A report by a young French student, Thibault Faney, regarding his Summer internship at M.I.T.

- A report by a young US student, Julie Tucker, on her internship at CEA Saclay Research Center.

Vice President Burchill and Julie Tucker →

- A report by a young French student, Pauline Gentner who, thanks to her Young Nuclear Engineer Award, attended the 2007 ANS Annual Meeting in Boston. She reported to the French Section's membership how interesting she found her international experience of involvement in such a prestigious meeting.

Pauline Gentner at the French Section General Assembly →

During his visit to France, Vice-President Burchill met with the French Section's 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 two technical visits to AREVA facilities, specially organized for him with the participation of AREVA senior executives: one to the spent fuel reprocessing plant at La Hague, the other to the large component manufacturing workshop at Chalon *(see his article in ANS News).*

Dominique Grenèche

2008 TECHNICAL TOUR IN FRANCE FOR US ENGINEERING PROFESSORS

Following the past six successful technical tours of French nuclear facilities organized by the French Section for US nuclear engineering professors, a seventh one is under preparation (scheduled for **July 6 to 12) u**nder the leadership of Dominique Grenèche of AREVA, new French Section Chair. This tour will include a special visit to AREVA's La Hague plant, the Bure deep geological repository, the Marcoule Melox facility (MOX fuel fabrication), the ATALANTE main hot laboratories for research on advanced fuel cycles, the Phenix Fast Neutron Reactor, and AREVA's large component fabrication facility in Chalon.

INTERNATIONAL CONFERENCES

As it is every year, a great number of Section members are directly involved in the sponsorship and organization of ANS Topical Meetings and international

conferences. For instance, several French nuclear experts are involved in the incoming important meeting ICAPP 2008- International Congress on Advances in Nuclear Power Plants, to be held in Anaheim in conjunction with the ANS Annual Meeting. Moreover, a major project is the ongoing organization of **GLOBAL 2009/Topfuel 2009,** to be held in Paris **6-11 September** and which will focus on **"The Nuclear Fuel Cycle: Sustainable Options and Industrial Perspectives".** Bernard Bigot, French High Commissioner for Nuclear Energy, will be the General Chair, and Dominique Grenèche (AREVA), new French Section Chair, will be Technical Program Chair.

YOUNG NUCLEAR ENGINEER AWARD

The French Section opens this award to French PhD students who work in nuclear research laboratories at AREVA, CEA and EDF and are interested in participating in ANS Topical or Annual Meetings to be held in the US. The Young Nuclear Engineer Award was presented to Didier Leuvrey who has just graduated, ranking first, from the French Institute for Nuclear Science and Technology. He will select an ANS Meeting in the US, and the grant will support his travel expenses, the registration fee and his accommodation during the meeting.

INTERNATIONAL STUDENT EXCHANGE PROGRAM

Three French students, Thibault Faney and Loïc Rakotojoana from *Ecole des Mines de Paris,* Renaud Klein from the Grenoble National School of Physics, have been sponsored by the French Section for internship at MIT, Wisconsin Madison University and AREVA NP/Richland respectively. Reciprocally, in the framework of specific exchanges with US universities, four American students were welcomed at the CEA for an internship: Eryn Haney and Julie Tucker from Wisconsin University, Alexander Maslowski from Texas A&M University- student of Professor Burchill - and Noah Grant from Berkeley University. The French Section is currently selecting students for the 2008 summer internships.

NEWSLETTER AND WEBSITE

The French Section publishes a periodical Newsletter, **SF@NS.news,** which it sends by e-mail to its members and in addition 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 as well as to 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), 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 acts 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 or executives, in National Standing Committees and Professional Divisions of the ANS. The new French Section 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.

Vice President Burchill with the French Section new Board, from left to right: France Brès-Tutino, Rosine Couchoud, Alain Kavenoky, Frank Carré (Past Chair), Jean-Claude Yazidjian (Secretary General); William Burchill, Dominique Grenèche (new Chair); Edouard Hourcade (Young Generation Rep), Jean-Claude Gauthier (Vice Chair) and Boris Supiot.

- India:

Dr. Placid Rodriguez, President, Indian Nuclear Society, was awarded the Electron Microscope Society of India's 2007 lifetime achievement award in Materials Science, in recognition of yeoman and sustained contributions to materials research using electron microscopy. He received the award at the annual conference of EMSI at

Delhi University November 26 2007, where he also delivered the award lecture "Electron Microscopy and the Strength of Materials". Our heartiest congratulations to Dr. Rodriguez!

- Atomic Energy Society of Japan:

It is with deep sadness that we received news of the passing on April 17, after a long illness, of Dr. Kioto Aizawa, of the Japan Atomic Energy Agency and member of the ANS International Committee. Dr. Aizawa will be sadly missed by all his colleagues and friends in the ANS and internationally. Dr. Aizawa's contributions to the ANS Globe on the nuclear program in Japan were always very insightful and much appreciated. On behalf of the ANS Globe, we would like to extend to Mrs. Aizawa and her family our very deepest condolences.

- Japan ANS Local Section:

  - The Japan Local Section held its 38th General Meeting of Members in March 2008. The Section holds Topical meetings every two to three months.

- Latin American Section (http://www.las-ans.org.br)

Ing. Othon Luiz Pinheiro da Silva, Vice-President/President Elect of LAS/ANS, sends the following report:

The Symposium "Reactivation of Nuclear Power Plant Construction in Latin America" will take place 2008 June 16-19 June 2008 in Rio de Janeiro. The Symposium will deal with the following subjects:

- Energy matrix in Latin American countries and the contribution of nuclear power
- Status of NPPs under construction in Latin America
- Progress of demonstration and implementation of new-generation NPPs
- Fuel cycle and safeguards systems in Latin American countries
- Progress of technologies for irradiated nuclear fuel repositories
- Technologies and international programs towards nuclear non-proliferation
- Development of non-power nuclear applications in Latin America.

This edition of the LAS/ANS SYMPOSIUM 2008 will also include an Exhibition of products, equipment and services for the nuclear-power sector and other nuclear

applications, in partnership with TDN - Consultoria, Comunicação & Marketing, which will organize the EXPO NUCLEAR ENERGY TECHNOLOGY RIO 2008.

The Organizing Committee invites interested professionals to present papers on aspects of nuclear technology and nuclear energy applications. Papers may be written in Spanish, English or Portuguese. Plenary-Session presentations will have simultaneous interpretation.

- Lithuanian Energy Institute (http://www.lei.lt/index.php?k=9)

Dr. Rolandas Urbonas, Scientific Secretary and Head of the Information Department, sends the following report:

The Lithuanian Energy Institute (LEI) was established in 1956 and became known among the local and international scientific society interested in fundamental research in hydrodynamics, thermal physics, material science, simulation and control of power supply systems, hydrology. In January 1992 the Government of the Republic of Lithuania granted a state science institution status to the Institute, which became independent from the Academy of Sciences.

The LEI is a technical research centre dealing with the nuclear safety of Ignalina NPP, energy-related research in thermal physics and fluid mechanics, structural-integrity assessment of components and structures, investigation of the RBMK fuel-channel-ageing process and determination of safe operation criteria, development of energy planning methods, analysis of security of energy supply, research on safety and reliability of power plants and their effects on thermal behaviour of cooling pools, studies of refectories and chemically resistant materials, and simulation of complex energy systems. LEI has 307 persons on staff. Among them there are 13 Dr. Habilitus, 78 Ph.D., 34 researchers with B.Sc. and M.Sc. and 24 Ph.D. Candidates. The Institute has extensive experience in international projects, among them projects directly related to the nuclear field:

- EU Framework 6 project **Network of Excellence for a Sustainable Integration of European Research on Severe Accident Phenomenology and Management (SARNET)** (www.sar-net.org)
- EU Framework 6 project **Nuclear Plant LIFE Prediction (NULIFE)**.
- EU Framework 7 project **Treatment and Disposal of Irradiated Graphite and Other Carbonaceous Waste (CARBOWASTE).**

Main events related to the Lithuanian Energy Institute:

- NATO Advanced Research Workshop "Consideration and Options on a New Nuclear Power Plant at Ignalina" on 23 -25 September 2002, Vilnius
- 4th Baltic Heat Transfer Conference on 25-27 August 2003 (photo at right) →

- NATO Advanced Research Workshop "Baltic Energy Security and Independence" on 21-23 June 2004
- 16 June 2006 signed collaboration agreement between EU JRC Institute for Energy and Lithuanian Energy Institute (photo at right) →

- 10 November 2006 signed collaboration agreement between A. V. Luikov Institute (Belarus) and Lithuanian Energy Institute
- 8 January 2007 signed collaboration agreement Università degli Studi di Milano-Bicocca (Italy) and Lithuanian Energy Institute
- 2 February 2007 signed memorandum of understanding between American Nuclear Society and Lithuanian Energy Institute
- 4th Conference of Young Scientists on Energy Issues 2007 on 7 June 2007
- 5 December 2007 Lithuanian Energy Institute and Ignalina NPP were granted a golden medal of Lithuanian industrialist confederation competition "*Lithuanian product of year 2007*" for the implemented project "Fuel reuse of Ignalina NPP Unit 1 in Unit 2 reactor".

From left to right:
President of Lithuanian Industrialist Confederation Mr. B. Lubys,
LEI Director Prof. E. Uspuras, and
President of the Republic of Lithuania H.E. Mr. V. Adamkus

- 5th Conference of Young Scientists on Energy Issues 2008 on 29 May 2008

- Sociedad Nuclear Mexicana

  Past President Juan-Luis Francois of the Sociedad Nuclear Mexicana sends the following report with news:

  The XIXth Annual Meeting of the SNM, "Atoms for the Development of Mexico", will be held 2008 July 6-9 in the city of Mérida, Yucatan, México (http://congreso2008.sociedadnuclear.org.mx/).

  The new President of the Mexican Nuclear Society for the 2008-2009 term is Prof. Edmundo del Valle, evg@sociedadnuclear.org.mx or edmundo.delvalle@gmail.com.

- Morocco:

Professor Oum Keltoum Bouhelal has provided a summary of some activities carried out in the framework of the ANS/AIGAM Agreement of Cooperation on scientific exchanges in the field of the peaceful use of nuclear energy, first signed in 2003. Scientific exchanges since then have been as follows:

- **AIGAM Conference "Nuclear Power Today and Tomorrow"**, held in Rabat, 2005 November 24-25, and co-sponsored by ANS/OPD. Two ANS members participated:
  - Mark Reinhart, who presented 2 papers: "Nuclear Energy Technology: Benefits, Ecology, Economy" and "Safety Culture"
  - Arkal Shenoy, Director MHR Energy Group, General Atomics, who presented the paper "High Temperature MHR Design, Technology and Applications"
- **PHYTRA1 Conference (Physics and Technology of Reactors and Applications",** held in Marrakech, 2007 March 14-16, organized by the GMTR and co-sponsored by 3 ANS Divisions: Reactor Physics, Operation and Power, and Mathematics and Computation. This Conference was attended by ANS President Harold McFarlane and a number of other members, as well as representatives from the French Nuclear Society (SFEN), the Canadian Nuclear Society (CNS), the Atomic Energy Society of Japan (AESJ), and others.

Scientific work and papers from Morocco have also been presented by Prof. Bouhelal at several ANS National Meetings, e.g. in Washington (2004 November), San Diego (2005 June), Washington (2005 November), Reno (2006 June), Boston (2007 June), and at PBNC-14 (Honolulu, 2004 March).

The AIGAM membership has embraced this cooperation with enthusiasm, and has shown great interest in these scientific exchanges. The ANS has included them on its website, www.ans.org, and has also published articles on the two conferences it co-sponsored in the ANS Globe and ANS News. The ANS International Department and its staff, Mr. Mike Diekman in particular, have worked hard for the success of these activities.

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

Karen Daifuku, Chief of Cabinet, Head of the Central Secretariat, External Relations and Public Affairs, sends the following report:

The Nuclear Energy Agency (NEA) is a semi-autonomous body within the Organisation for Economic Co-operation and Development (OECD), located in the Paris area in France. Of the 30 OECD member countries, 28 are members of the NEA:

Australia	France	Japan	Slovak Republic
Austria	Germany	Luxembourg	Spain
Belgium	Greece	Mexico	Sweden
Canada	Hungary	Netherlands	Switzerland
Czech Republic	Iceland	Norway	Turkey
Denmark	Ireland	Portugal	United Kingdom

Finland	Italy	Republic of Korea	United States

**Note: the Russian Federation and Slovenia participate in the Agency's activities as observers. The European Commission (EC) takes part in the work of the NEA and a co-operation agreement is in force with the International Atomic Energy Agency (IAEA).*

The objective of the Agency is to assist 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 information, data and analyses it provides draw on one of the best international networks of technical experts.

Main areas of work

The Agency's programme of work covers the following areas:

- nuclear safety and regulation;
- radioactive waste management;
- radiation protection and public health;
- nuclear science;
- economics, resources and technology ;
- legal affairs.

Multinational joint projects

The Agency's joint projects and information exchange programmes enable interested countries, on a cost-sharing basis, to pursue research or the sharing of data with respect to particular areas or issues. The projects are carried out under the auspices, and with the support, of the NEA. There are currently 20 NEA joint projects under way in the areas of nuclear safety research (13), nuclear safety databases (4), radioactive waste management (2) and radiological protection (1). Full descriptions of each project are available on the NEA website at www.nea.fr/html/jointproj/.

Supporting international collaborative initiatives

The NEA has recently been invited to continue to act as Technical Secretariat for the Multinational Design Evaluation Programme (MDEP), a function it also fulfils for the Generation IV International Forum (GIF).

Upcoming meetings of potential interest to ANS members

- Risk-informed Piping Integrity Management, Madrid, Spain, 2-4 June 2008
- Other nuclear safety and regulation meetings open to the public are listed at www.nea.fr/html/nsd/.

- Information Exchange Meeting on Actinide and Fission Product Partitioning and Transmutation, Mito, Japan, 6-10 October 2008
- Other nuclear science meetings open to the public are listed at www.nea.fr/html/science/meetings/.

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:

The Japan Atomic Industrial Forum, Inc. (JAIF) and the Atomic Energy Society of Japan (AESJ) are pleased to host the Pacific Basin Nuclear Conference (PBNC) and technical exhibitions under the auspices of Pacific Nuclear Council (PNC) on October 13-19, 2008 in Aomori, Japan. The Conference theme is "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 16PBNC website is http://www.pbnc2008.org/.

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

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

The Swiss Nuclear Society is working hard in preparing to host PHYSOR-2008 (ANS Reactor Physics Topical), 2008 September 14-19, as well as IYNC-2008 (International Youth Nuclear Congress 2008), 2008 September 20-26, both in Interlaken, Switzerland.

- Slovak Nuclear Society (www.snus.sk)

Juraj Klepac, General Secretary of the Slovak Nuclear Society (SNUS), sends the following report describing the activities of the SNUS this past year:

Every year the SNUS co-organizes two international conferences. The first, NUSIM (Nuclear Seminar and Information Meeting), is organized together with the Czech and German Nuclear Societies. NUSIM 2008 will take part in the mountain recreational resort of Casta-Papiernicka, right after the SNUS General Assembly.

The second international conference is co-organized with the Slovak Nuclear Forum and takes place in our capital, Bratislava, usually in the beginning of October. Last year's was Secure Energy Supply 2007 (SES 2007), held October 3-5, and the next will be SES 2008, in Bratislava, Slovakia. The SES 2008 agenda includes the following topics:

- Secure energy supply
- Outlook of power industry in the Slovak Republic and in the world up to 2030
- Transmission and distribution of energy, safety, reliability and supporting services
- Impact of power industry on the environment
- Nuclear safety, back end of fuel cycle

• Completion of Units 3 and 4 at Mochovce NPP
• Liberalization and regulation of energy market
• Renewable and alternative energy sources
• Education, motivation and research in the power sector
• Investment opportunity in Slovak power industry

Besides these "major events", the SNUS organizes or supports seminars, meetings and workshops, not only for experts but also for students and the young generation. In 2007 we can mention the seminars

- "Experience from the commissioning and operation of VVER units" (Demanova, February 13-16, 2007)
- "Supplier-customer relations and care for the customer" (Casta-Papiernicka, March 21, 2007) – photo at right

- Education seminar on new legislation in safety requirements at work (Demanova, May 15-17, 2007)
- Science and technology week in Slovakia (November 11, 2007)
- "Physical model of reactor fuel assembly" (December 13, 2007)
- Seminar SNUS Young Generation and FORATOM (Bratislava, November 26-27, 2007) - see photo at right:

The SNUS published the book "Atoms in Slovakia" as one of its contributions to the World Year of Physics (2005). "Atoms in Slovakia" was dedicated to the memory of J. Suchomel, a former chairman of the Slovak Nuclear Society and an enthusiastic publicist for Slovak nuclear physics, technologies and the energy sector, who was the inspiration for the book but who died prematurely.

Greetings to ANS International Committee from all SNUS members!

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

Dr. Boštjan Končar, President of the Nuclear Society of Slovenia, sent the following report.

The Nuclear Society of Slovenia (NSS) was founded in 1991. Activities of the Society are based on principles of knowledge dissemination, the peaceful use of nuclear technology and environmental protection.

NSS has currently over 250 members. Young professionals and women in the nuclear field are gathered in two sections, which are actively involved in the work of NSS:

- Young Generation Network (member of YGN within ENS)
- Alpha section (member of Women in Nuclear Global)

One of the main Society activities is the organization of the traditional international conference "Nuclear Energy for New Europe", held every September. In 2007, 172 participants from 22 countries attended the conference(see photo below). This year, the 17th conference will be held September 8-11 in Portorož, Slovenia (www.nss.si/port2008/).

In terms of knowledge dissemination among Society members, NSS has organized 5 expert lectures in 2007 and a study tour to nuclear facilities in France. The Society also strives for objective public information and supports open dialogue with the general public. Two public discussions with representatives of the Slovenian government and the European Parliament were organized last year: "Energy Policy in Slovenia and EU" and "Nuclear Future in Slovenia". Among publishing achievements are the English-Slovene Glossary of Nuclear Technology, Atlas of Nuclear Technology, and recently a monograph "Physics my profession – life and work of women in physics". The NSS regularly issues its own newsletter "Jedrce" (Nucleus).

Important NSS activity is promotion and encouragement of studies related to all nuclear disciplines, lately especially to nuclear energy. In cooperation with the University of Ljubljana NSS organizes a competition for graduate students of engineering and physics for the best work in the field of power engineering. Members of Young Generation promote education and job opportunities in the nuclear field at various job-opportunity fair shows.

The Society collaborates with many institutions at home and abroad and is a member of the European Nuclear Society (ENS).

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.

- 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)

  RPD is looking forward to PHYSOR-2008, which will be held 2008 September 14-19 in Interlaken, in the beautiful Swiss Alps, with the theme "Nuclear Power: A Sustainable Resource" (see Calendar of Events below).

- Environmental Sciences Division (http://esd.ans.org)

  The ESD selected Professor Wolf Haefele of Germany as the initial recipient of its newly created W. Bennett Lewis Award. Prof. Haefele was selected from three outstanding candidates of international acclaim. The Award, which was presented on November 13, 2007, at the Honors and Awards luncheon of the ANS Winter Meeting and European Nuclear Society International Meeting in Washington, DC, was accepted on Prof. Haefele's behalf by Mr. David Bonser, Vice-President of the European Nuclear Society and Honorary Chairman of the Meeting, and also Executive Director of BNFL.

Election to ANS Board of Directors

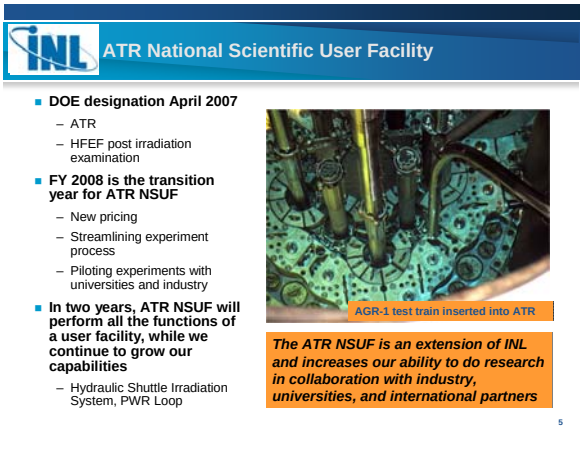
Heartiest congratulations to Dominique Grenèche, of Areva, France, who was elected as Non-US Member-At-Large (for the Europe/Africa Region) on the ANS Board of Directors. Dominique Grenèche was one of three nominees suggested for the 2008 election by the International Committee.

Highlights from the 2007 November Washington Meeting

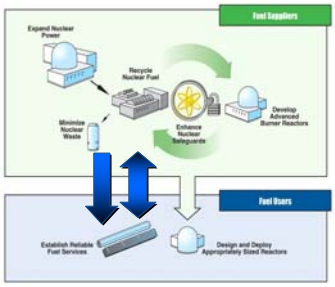
Renewal of ANS/Chinese Nuclear Society Agreement Renewal

2007 November 11: Dr. Changxin Liu, Deputy Secretary-General of the Chinese Nuclear Society (CNS) and France Brès-Tutino, Chair of the ANS International Committee, review together the renewed ANS-CNS agreement.

Presentation on the "Future of INL, GNEP and NGNP" by Dr. Phillip Finck, Associate Laboratory Director, Nuclear Science and Technology:



Global Nuclear Energy Partnership (GNEP)



Global Nuclear Energy Partnership
Resource Management and Nonproliferation

Addresses waste and proliferation concerns

INL—leading the integration of technology development for GNEP and supporting community efforts to site GNEP facilities at the INL

6

Global Nuclear Energy Partnership

- **INL established a Technical Integration Office**
  - INL lead, SRNL and LANL deputies
  - Coordinates technology development across campaign structure
  - Provides technical support to DOE
  - Several strategic and critical hires added to TIO last two FYs
- **INL leads three campaigns and is involved in all of the campaigns**
- **Completed 50 R&D related milestones in FY 2007**
- **INL scope and funding is growing**

DOE laboratories and industry will be working toward providing input to a Secretarial decision this FY on the direction of GNEP

7

Next Generation Nuclear Plant

- **Addressing barriers to development of advanced reactor technology for process heat, electricity, and hydrogen**
  - Pursuing a very high temperature reactor
  - 2018 schedule for startup
- **Transformed NGNP from an R&D program into a project, providing a structure suitable for growth with heavy participation from private sector**
- **Developed a model for the development of a public-private partnership deemed key to the success of executing large energy projects**
- **Associated to a vibrant Nuclear Hydrogen Program**

A public/private partnership will lead the development of NGNP

8

NGNP Accomplishments in FY 2007

- **Insertion of AGR-1 into ATR for Fuels performance evaluation**
- **Performed pre-conceptual design work in concert with 26 companies grouped in 3 teams**
- **Acquisition strategy and technology development plans for graphite were developed**

9

Presentation by Dr. Boštjan Končar, President of Nuclear Society of Slovenia (www.nss.si):

Slovenia is the smallest nuclear country, with a population of some 2 million inhabitants in an area of ~20,000 km^2. Slovenia's GDP per capita in 2005 was 13,800 euros (~$19,700).

Slovenia's nuclear assets are:

- Krško Nuclear Power Plant
- Research reactor TRIGA Mark II
- Uranium mine (closed)
- Interim Storage for LILW (not for waste from NPP)

Nuclear-related entities in Slovenia are:

- Official institutions
  - Slovenian Nuclear Safety Administration
  - Health Inspectorate
  - Agency for Radwaste Management
  - GEN energija – NPP Krško owner (1/2)
- Technical support organisations
  - Different Institutes, some specialised organisations
- Research and development
  - Jožef Stefan Institute (several departments)
- Education and training
  - Two universities, Jožef Stefan Institute, Krško NPP
- Nuclear Society of Slovenia

Krško NPP

Electricity Production: Slovenia generated 13,185 GWh of electricity in 2005, from nuclear (40%), fossil (36%) and hydroelectric (24%) power plants. Some 20% of the electricity used in Slovenia is imported.

Krško NPP is a Westinghouse two-loop PWR, 696 net MWe. It went into commercial operation in 1983. It is jointly (50/50) owned by the Republics of Slovenia and Croatia. It ranks in the leading quarter of the most successful NPPs in the world (with a performance indicator index of 99.93 in the last trimester of 2006). Before the regular outage which started 2007 October 5, it had operated without interruption for a record-breaking 510 days.

Nuclear R&D is carried out at the Jožef Stefan Institute (JSI), the leading Slovene research organisation. The Reactor centre of the JSI is situated near Ljubljana. It has a 250-kW General Atomics research reactor, which has been operational since 1966. The JSI has a professional staff of more than 80, and divisions/departments in Nuclear

Engineering, Reactor Physics, Low-and-Medium-Energy Physics, and Environmental Sciences.

Education and Training:

- The University of Ljubljana, a member of the European Nuclear Education Network (ENEN) has a Postgraduate program in Nuclear Engineering, established about 30 years ago. It offers Ph.D.s and Master of Science degrees.
- The Nuclear Training Centre Milan Čopič at JSI offers:
  - Training for Krško NPP
  - Radiological protection training
  - Public information
- There is also a full-scope simulator in Krško NPP, which is used for operator training.

Nuclear Society of Slovenia (NSS)

- Member of ENS, founded in 1991
- A volunteer association in the field of peaceful use of nuclear science and technology.
- NSS has currently over 250 members and 2 sections:
  - Young Generation Network - group of young profesionals, member of YGN within ENS
  - Alpha section - women in nuclear, member of WIN Global
- The main scope and goals of NSS are:
  - To manage and provide objective public information about nuclear issues
  - To support and coordinate information exchange and knowledge dissemination between Society members and nuclear organisations
  - To support publishing literature and systematic work toward creating Slovenian terminology in the nuclear field
  - To take part in decision-making in issues concerning nuclear energy, technology, education and science
  - Co-operate with similar international and national associations and expert organisations.

Young-Generation Corner

IYNC2008!

The Young Generation is looking forward eagerly to IYNC2008, the Fifth International Youth Nuclear Congress, which will be held September 20-26, 2008, in Interlaken, Switzerland, immediately following PHYSOR-2008.

Special Attached Article

Communicating Benefits of Nuclear Energy Increases U.S. Public's Support

Ann S. Bisconti, Bisconti Research Inc.
April 2008

U.S. public opinion toward nuclear energy has become quite favorable in recent years, and a new national poll this April shows continued support. Nearly two-thirds (63 percent) favored nuclear energy, 59 percent supported definitely building more nuclear power plants in the future, and 66 percent said that they would find it acceptable to add a new reactor at the nearest nuclear power plant site. Public support is due to a general sense that we need nuclear energy, coupled with growing awareness of the benefits that nuclear energy provides.

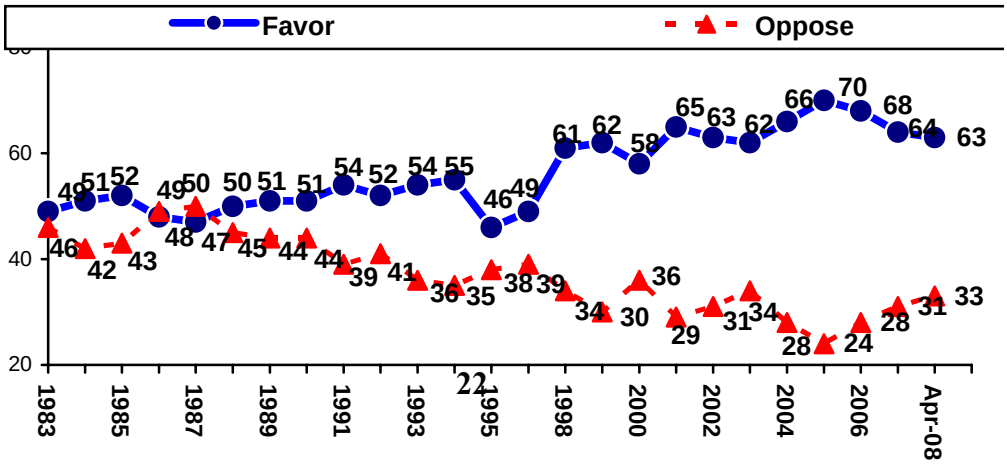
To understand public attitudes, Nuclear Energy Institute (NEI) has sponsored public opinion surveys on nuclear issues for 25 years. The surveys, with nationally representative samples of 1,000 U.S. adults, have a margin of error of plus or minus three percentage points. Bisconti Research conducted the latest survey with GfK April 10-13, 2008.

Public Favorable to Nuclear Energy and New Plants

The long-term trend shows a widened gap between those who favor and those who oppose nuclear energy. In the early 1980s, the public was divided about equally between supporters and opponents. In recent years, supporters typically outnumber opponents by about 2 to 1.

A majority of the public does not hold strong opinions, so constant communications are essential. Currently, those who strongly favor nuclear energy outnumber those who are strongly opposed by 28 percent to 14 percent. Research shows that many of those who voice strong opinions are, in fact, changeable.

Percent Who Favor and Oppose Nuclear Energy: Annual Averages Until 2008
'Overall, do you strongly favor, somewhat favor, somewhat oppose, or strongly oppose the use of nuclear energy as one of the ways to provide electricity for the United States?"



Support increases with awareness of the need for nuclear energy and its benefits. Currently, about half the public associates nuclear energy "a lot" with reliability, efficiency, affordability and clean air. There is less recognition that nuclear energy is a solution to global climate change. For many Americans, global climate change is a new concern and one surrounded by considerable confusion.

The more people link these benefits with nuclear energy, the more they favor its use. For example, of those who associate nuclear energy "a lot" with clean air, 75 percent favor the use of nuclear energy. In contrast, of those who do not associate nuclear energy at all with clean air, only 30 percent favor the use of nuclear energy.

The U.S nuclear industry led by NEI uses a multimedia approach to communicate these benefits, including advertising, media relations, blogs, and credible spokespersons. Increasingly, nuclear professionals are engaged in communications through ANS, Women in Nuclear (WIN), and North American Young Generation in Nuclear (NA-YGN).

Perceptions of nuclear power plant safety are also important - more so than waste - because many people, even supporters, remain concerned about the "what if" accident. In April, 66 percent rated nuclear power plants safe (5-7 on a 1-7 scale).

Challenges at the National Level

Two significant communications challenges face the U.S. nuclear industry at the national level - one old and one new. The old challenge is the persistent perception gap. While a majority of Americans favor nuclear energy, many believe that a majority of the public is opposed. .

The new communications challenge results from the dramatic increase in media attention to the promise of solar and wind energy. In addition , many corporations advertise heavily their commitment to solar and wind energy to raise their reputation with the public. All this attention has resulted in soaring public expectations for these energy sources and a diminished view of nuclear energy as fuel of the future.

From 1983 until 2007, NEI surveys asked in various ways about which sources would supply the most electricity to the U.S. in 10 or 15 years: nuclear always came in first and solar second. In 2007, for the first time, solar was named more often than nuclear energy as the major source 15 years from now. This April, nuclear was in fifth place, behind solar, wind, and natural gas and tied with hydropower.

Attitudes toward nuclear energy typically become more favorable when energy prices increase as they have recently in the U.S.

Support appears to be sustained by the public desire to use all our energy sources and, especially, to reduce our reliance on fossil fuels. In fact, 84 percent in April agreed that "we should take advantage of all low-carbon energy sources, including nuclear, hydro,

and renewable energy, to produce the electricity we need while limiting greenhouse gas emissions." Because the association of nuclear energy with other carbon-free sources is so positive, it is a challenge to put into perspective the relative size of the contributions of the carbon-free sources without appearing to criticize any of the sources.

For New Plants, Local Support Matters Most

As the U.S. prepares for possible new plant orders, it is local support that matters most. New plants will be built in locations where they are wanted. In 2007, with a sample of 1,152 from the 64 U.S. nuclear power plant sites (excluding electric company employees):

- 82 percent favored nuclear energy
- 6 percent had a favorable impression of the nearby nuclear power plant
- 87 percent had confidence in their electric company to operate a nuclear power plant safely.
- 71 percent said that a new reactor at the nearest nuclear power plant site would be acceptable.

These numbers are grounded in familiarity with the plant and the people who work there, awareness of the large economic contribution of the plant to the local area, and positive perceptions of the benefits and safety of nuclear energy.

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@kiae.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://insc.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

- 4-9 May: Conference on Nuclear Engineering, Science and Technology: Training and Education (NESTet), Budapest, Hungary – www.nestet2008.org

- 28-30 May: Nuclear 2008, "Annual International Conference on Sustainable Development through Nuclear Research and Education", Pitesti, Romania – http://www.nuclear.ro

- 1-4 June: 29th Annual Conference of the Canadian Nuclear Society and 32nd CNS/CNA Student Conference, Toronto, Ontario, Canada – http://www.cns-snc.ca/conf2008.html

- 8-12 June: ANS Annual Meeting and ICAPP 2008, Anaheim, CA, USA – http://www.ans.org/meetings

- 22-27 June: 7th International Topical Meeting on Industrial Radiation and Radioisotope Measurement Application (IRRMA-7), Prague, Czech Republic - http://irrma7.fjfi.cvut.cz.

- 6-9 July: XIXth Annual Meeting of the Sociedad Nuclear Mexicana, "Atoms for the Development of Mexico", Mérida, Yucatan, México (http://congreso2008.sociedadnuclear.org.mx/).

- 6-10 July: ENERGEX 2008, 13th International Energy Conference and Exhibition, "Energy for Human Development and the Protection of the Environment", Vienna, Austria – http://www.energex2008.com (organized by AIMS International Congress Services)

- 3-6 August: Utility Working Conference, Amelia Island, FL, USA - http://www.ans.org/meetings

- 24-29 August: Seventh International Conference on Nuclear and Radiochemistry (NRC7), Budapest, Hungary, nrc7@mke.org.hu - Chair: Lazlo Wojnarovitz, Hungarian Academy of Sciences

- 7-11 September: International Topical Meeting on Probabilistic Safety Assessment and Analysis (PSA '08), Knoxville, TN, USA - http://www.psa2008.org

- 7-11 September: 2008 International High-Level Radioactive Waste Management (2008 IHLRW), Las Vegas, NV, USA - http://www.ans.org/meetings

- 14-18 September: PHYSOR-2008, ANS Reactor Physics Topical Meeting PHYsics Of Reactors 2008, "Nuclear Power – A Sustainable Resource", Interlaken, Switzerland; organized by the Swiss Nuclear Society and the Paul Scherrer Institute – http://www.physor2008.ch

- 20-26 September: IYNC-2008, International Youth Nuclear Congress 2008, Interlaken, Switzerland (hosted by the Swiss Nuclear Society) – http://www.iync.org/

- 28 September – 2 October: 18th Topical Meeting on the Technology of Fusion Energy, San Francisco, CA, USA - http://www.ans.org/meetings

- 1-3 October: SES2008, International Conference on Energy Supply, Bratislava, Slovakia - http://www.snus.sk

- 5-8 October: 10th CNS International Conference on CANDU Fuel, Ottawa, Ontario, Canada – http://www.cns-snc.ca/simulation2008.html

- 5-9 October: NUTHOS-7, 7th International Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety, Seoul, Korea – http://www.nuthos-7.org

- 13-17 October: 16PBNC, 16th Pacific Basin Nuclear Conference, Aomori, Japan; organized by the Japan Atomic Industrial Forum (JAIF) and the Atomic Energy Society of Japan (AESJ) – http://www.pbnc2008.org

- 19-24 October: IRPA 12, 12th International Congress of the International Radiation Protection Association, "Strengthening Radiation Protection Worldwide", Buenos Aires, Argentina – http://www.irpa12.org.ar/

- 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

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

- Apr-May: ICAPP 2009, Tokyo, Japan

- 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

- 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

- 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.

- 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

- 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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