



# **International Conference on the Challenges faced by Technical and Scientific Support Organizations in Enhancing Nuclear Safety**

Aix-en-Provence, France  
23-27 April 2007

*Organized by the*  
International Atomic Energy Agency

*Hosted by the*  
Government of France  
*through the*  
Institut de Radioprotection et de Sûreté Nucléaire (IRSN)

## **ANNOUNCEMENT AND CALL FOR PAPERS**

## **1. INTRODUCTION**

The nuclear industry is going through a period of unprecedented change. The changes arise from the political and business environment in which the industry must operate – notably the restructuring of the wider electricity industry, increased competition in the electricity markets, expected or expanded application of nuclear energy by countries with limited technical and legal infrastructures, also in the context of the nuclear renaissance, generational changes and the risk of loss of competence and research capabilities – and from within the industry itself. Further changes can result from the change of governments or the political landscape, and changes in technology. These pressures have already resulted in significant changes to how nuclear enterprises are organized and operated. These changes can be expected to continue. Moreover, new projects and designs for reactors and other facilities, as well as new approaches to ensuring safety, may also influence the changes.

It is essential that throughout this period of change, and after the changes have occurred, high levels of nuclear and radiation safety are maintained and applied all over the world. It is also essential that effective nuclear regulatory systems ensure delivery of independent and efficient regulation to the nuclear industry and to other users of nuclear technology so that governments and society can be assured that the nuclear activities are operating safely, consistent with national/international standards. In this respect, the involvement of all countries and expert organizations as active partners in the Global Nuclear Safety Regime is of utmost importance.

Nuclear and radiation safety are based on technical, managerial, administrative, and organizational provisions. In this respect, the role and quality of technical and scientific expertise in the nuclear industry and of regulatory systems are of fundamental importance.

Technical and Scientific Support Organizations (TSOs), whether part of the regulatory body or a separate organization, are gaining increased importance by providing the technical and scientific basis for decisions and activities regarding nuclear and radiation safety. The international programmes such as those of the IAEA and OECD/Nuclear Energy Agency depend on the active participation of TSOs. Because of this important role, technical competence, transparency and the observance of ethical principles are essential. In this respect, interaction and cooperation between TSOs, in ad hoc frameworks or in the frame of regional and international networks, should be fostered.

This conference, being the first international conference to address TSOs, will focus on developing a global vision on TSOs and recommendations for the future. It is expected to provide a platform for further promoting and strengthening international nuclear and radiation safety cooperation to enhance the Global Nuclear Safety Regime.

## **OBJECTIVE**

The objective of this conference is to develop a common understanding of the TSO's responsibilities, needs, and opportunities, as well as explore appropriate approaches and means to face current and expected challenges in nuclear and radiation safety. In this context, the conference will:

- Discuss the roles, functions, and value of TSOs, and the challenges and opportunities faced by them;

- Capture, analyse, and share knowledge and experience;
- Foster continued dialogue on the technical, scientific, organizational, and legal aspects, at the international level;
- Discuss the measures to promote cooperation and networking among TSOs at an international level.

### **3. TOPICS**

The following topical issues have been identified as subjects for the conference sessions.

#### **Topical Issue 1: Roles, functions and value of TSOs**

This session will address technical and scientific support both to the nuclear regulatory bodies and to the industry. In particular, it will consider the respective scope of activities of TSOs, their relationships with others stakeholders, and the benefits they provide for nuclear and radiation safety.

Typical topics for discussion will address:

- Different types of TSOs
- Mission statements, goals/core values and strategic planning
- TSOs provide key support for the technical and scientific basis for decision making:
  - Regulatory body maintains responsibility for licensing and supervising decisions
  - Industry maintains responsibility for the safe operation of their facilities/activities and for the appropriate technical solutions needed
- Role of TSOs in enhancing nuclear and radiation safety:
  - Support to the regulatory/licensing process in developing and establishing regulations, review and assessment, inspection, and enforcement
  - Early warning to regulators and industry/operators on potential safety issues
  - Safety research and development of the technical and scientific knowledge base
  - Emergency preparedness and response
  - Provision of training to third parties: national/international
  - Public information/debate, openness, transparency
- Value/benefits of TSOs for nuclear and radiation safety:
  - Independent technical and scientific advice for decision making
  - Increased public confidence
  - Increased flexibility for regulators and operators, especially with respect to human resources and expertise.

#### **Topical Issue 2: Challenges faced by TSOs and TSO effectiveness**

This session will address the prerequisites for the respective TSOs to carry out their activities related to providing objective scientific and technical expertise, based on available knowledge, demonstrations and tools, and professional judgement. Key elements such as

technical and scientific competence, human and financial resources, effective management, and confidence of the stakeholders in the TSOs will be considered.

Typical topics for discussion will address:

- The technical challenges faced by TSOs:
  - Keeping pace with the evolving state of science and technology
  - Ageing aspects including that of the workforce
  - New concepts/technology
  - Developments in the understanding of the potential health effects of acute and chronic radiation exposures
- Access to:
  - Information (precursors, operational experience feedback, incidents below reporting criteria/notification levels)
  - Research results
  - Needed facilities
- Synergy between research and expertise
- Conflict of interest/independence
- Human resources:
  - Recruitment and training of staff, knowledge transfer
  - Mobility of staff
- Funding of TSO/marketing issues
- Credibility, visibility and confidence in the TSOs:
  - Qualification of work processes and products
  - Interaction with the public
- Measuring and improving the effectiveness of TSOs

### **Topical Issue 3: International cooperation, networking and application of IAEA safety standards**

This session will address the sharing of technical and scientific expertise and the pooling of resources. This is expected to contribute to the convergence of technical and scientific practices in nuclear and radiation safety and the enhancement of the Global Nuclear Safety Regime.

Typical topics for discussion will address:

- Modalities of international cooperation
- Networking to share nuclear and radiation related information and knowledge
- Fostering continuous improvement of technical and scientific capabilities in TSOs
- Networking of TSOs to provide expertise to other countries
- Networking as a way to bridge geographical and cultural barriers
- Contributing to the development of international safety standards and fostering/promoting their use
- Fostering the convergence of technical practices in the context of harmonization and application of regulations
- Facilitating the implementation of international legal instruments

#### **Topical Issue 4: Perspectives of the evolving needs for technical and scientific support**

This session will address the evolving requirements, in the short and medium terms, on TSOs to keep pace with changes in nuclear technology from the perspective of:

- Regulator
- Operator/Industry
- Users of nuclear and radiation technology
- Local authorities

#### **4. PROGRAMME STRUCTURE**

The **opening session** will highlight the importance of the conference and address the conference's global objectives.

A series of **four technical sessions** will address the individual topical issues mentioned above. After the discussions in the technical sessions, conclusions and recommendations will be drawn up.

Each session will consist of:

- Lead-in presentations
- Invited papers
- Open discussion.

A closing **panel discussion** will focus on "**Strengthening Technical and Scientific Support: Recommendations for the Future**".

This discussion will bring into focus the essence of the various sessions and be the capstone of the week's activities, and will provide strong input for the conference's concluding session.

Participants will include senior executives from regulatory bodies and technical support organizations.

The conference will feature a **concluding session** at which the overall results and conclusions of all topical sessions and the panel discussion will be summarized by the chairpersons. The President of the Conference will highlight the recommendations for the future development of international cooperation, including how to transfer the results of the topical discussions to provide feedback for the IAEA's programmes.

#### **5. AUDIENCE**

The conference is directed at the TSOs, regulators, industry/operators, research organizations, and other relevant stakeholders.

## 6. PARTICIPATION

All persons wishing to participate in the conference are requested to complete a Participation Form (Form A) and send it as soon as possible to the competent national authority (see Section 9) for subsequent transmission to the IAEA. A participant will be accepted only if the Participation Form is transmitted through the competent official authority of a Member State of the IAEA or by an organization invited to participate.

Details on the logistics of the conference will be sent to all designated participants approximately three months before the meeting. This information will be posted on the conference web page: <http://www-pub.iaea.org/MTCD/Meetings/Meetings2006.asp>

## 7. CONTRIBUTED PAPERS

Concise papers on issues falling within the scope of the conference (see Section 3 above) are welcomed as contributions to the conference. These papers will not be presented orally, but will be summarized by the chairpersons and included in a Book of Contributed Papers to be distributed free of charge to all participants upon registration. Authors of contributed papers are encouraged to present the substance of their paper(s) in the form of posters.

The contributed papers should not exceed **four pages** in length and must be submitted in English. Each contributed paper must be preceded by an abstract not exceeding 300 words. Authors should state to which of the above technical topics their contribution relates. Authors must use the IAEA's Proceedings Paper Template in Word 2000 (user instructions are available on the conference web page (see Section 15)). Guidelines for the preparation of a contributed paper are given in the attached 'IAEA Guidelines for Authors on the Preparation of Manuscripts for Proceedings'.

The contributed papers should be submitted to the following e-mail address:

[G.Philip@iaea.org](mailto:G.Philip@iaea.org)

or sent on diskette/CD-ROM to the Scientific Secretariat (see Section 14). The diskette label should identify the paper, the proposed session topic and the software application used (the use of Microsoft Word is encouraged). To permit selection and review, the electronic version of the contributed paper must be received by the Scientific Secretariat not later than **31 October 2006**.

In addition to the electronic submission, a copy of the contributed paper(s) must also be submitted through one of the competent official authorities (see Section 9). The paper should be sent with a completed Form for Submission of a Paper (Form B) and the Participation Form (Form A) to reach the IAEA not later than 31 October 2006.

**Only papers that have been received by the above deadline(s) and through the appropriate official channels** will be considered for inclusion in the Book of Contributed Papers. Final acceptance will occur after a peer review process. Furthermore, the Secretariat reserves the right to exclude papers that do not comply with its quality standards and do not apply to one of the topics set out in Section 3, above.

Authors will be informed by 20 December 2006 whether their papers have been accepted for inclusion in the Book of Contributed Papers and for presentation as a poster.

## **8. EXPENDITURES/GRANTS**

No registration fee is charged to participants.

As a general rule, the IAEA does not pay the cost of attendance, i.e. travel and living expenses, of participants. However, limited funds are available to help meet the cost of the attendance of selected specialists, mainly from developing countries with low levels of economic resources. Generally, not more than one grant will be awarded to any one country.

If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants:

- (a) are submitted by **31 October 2006**;
- (b) are accompanied by a duly completed and signed Grant Application Form (see attached Form C).

**Applications that do not comply with the conditions stated under (a) and (b) cannot be considered.**

The grants awarded will be in the form of lump sums and will usually cover **only part of the cost** of attendance.

## **9. CHANNELS OF COMMUNICATION**

The Participation Form (Form A), the Paper Submission Form (Form B) and, if applicable, the Grant Application Form (Form C) must be sent through one of the competent official authorities (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA. Subsequent communications concerning technical matters should be sent to the Scientific Secretary and communications on administrative/logistical matters to the Conference Secretariat (see Section 14).

## **10. DISTRIBUTION OF DOCUMENTS AND PROCEEDINGS**

A preliminary programme of the conference will be sent to all officially designated participants well in advance of the meeting and will also be available on the IAEA conference web site (see Section 15).

The Final Programme and the Book of Contributed Papers will be available free of charge upon registration at the conference.

The Proceedings of the conference to be published by the IAEA will contain welcoming addresses, overview presentations, rapporteurs' reports, invited keynote papers, session summaries, the conclusions presented by the President of the Conference on the last day, and records of the discussions. The contributed papers will be included unedited on a CD ROM. The Proceedings can be ordered, at a special discounted price, during the Conference.

## **11. WORKING LANGUAGE**

The working language of the conference will be English.

Simultaneous interpretation into and from French will be provided. The conference programme and conclusions will be translated into French.

## **12. ACCOMMODATION**

Detailed information on accommodation and other administrative details will be sent to all officially designated participants approximately three months before the meeting. It will also be available on the IAEA conference web site.

## **13. VISAS**

Designated participants who require a visa (Schengen visa) to enter France should submit the necessary application to the nearest diplomatic or consular representative of France as soon as possible. Please note that under certain circumstances, the procedure could take at least three weeks.

## **14. CONTACT INFORMATION**

The following persons may be contacted for further information or assistance:

(a) Scientific issues – Scientific Secretary (IAEA)

**Mr. George Philip**

Department of Nuclear Safety and Security

IAEA-CN-142

P.O. Box 100

Wagramer Strasse 5

A-1400 Vienna, Austria

Telephone No.: +43-1-2600-22857

Telefax No.: +43-1-26007

Email: [G.Philip@iaea.org](mailto:G.Philip@iaea.org)



(b) Administrative issues - Conference Organizer (IAEA)

**Ms. Regina Perricos**

Conference Services Section

International Atomic Energy Agency

IAEA-CN-142

P.O. Box 100

Wagramer Strasse 5

A-1400 Vienna, Austria

Telephone No.: +43-1-2600-21315

Telefax No.: +43 1-26007

**E-mail:** [R.Perricos@iaea.org](mailto:R.Perricos@iaea.org)

**General mail for IAEA:** [official.mail@iaea.org](mailto:official.mail@iaea.org)

**15. CONFERENCE WEB PAGE**

Please visit the IAEA conference web site regularly for new information regarding the conference under:

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=142>