



**IAEA**

**International Atomic Energy Agency**

*Atoms for Peace and Development*

**International Conference on Enhancing Nuclear  
Safety and Security Through Technical and  
Scientific Support Organizations (TSOs):  
Challenges and Opportunities in a Rapidly  
Changing World**

**2–6 December 2024**

**Organized by the**  
International Atomic Energy Agency (IAEA)

**In Cooperation with the**  
European Technical Safety Organizations Network (ETSON)

**Announcement and Call for Papers**

## **A. Background**

The International Conference on Enhancing Nuclear Safety and Security through Technical and Scientific Support Organizations (TSOs): Challenges and Opportunities in a Rapidly Changing World to be hosted at IAEA Headquarters in Vienna, Austria from 2-6 December 2024. This conference will continue the tradition established by the four preceding conferences on this subject, which were held, respectively in Brussels, Belgium (2018), in Beijing, China (2014), in Tokyo, Japan (2010) and in Aix-en-Provence, France (2007).

Like the earlier conferences, the forthcoming one will play a vital part in the national and international efforts made to ensure the effectiveness of nuclear and radiation safety and security regulatory systems. This conference will also focus, in particular, on the development and strengthening of technical and scientific capabilities to achieve enhanced nuclear and radiation safety and security of facilities and activities, including operational legacy and emerging challenges as well as exchange and transfer of best practices with embarking countries interested in nuclear power to meet growing energy needs.

It is recognised that nuclear safety and security are to a great extent scientific in nature and that a regulatory body with responsibilities for nuclear facilities and other licensed activities involving radioactive material need to have continuous access to technical and scientific expertise supporting regulatory functions. In this regard, one of the main conclusions of the last conference in 2018 highlighted the need to assist Member States in their strategies to develop their TSO capacities in order to promote TSO's potential contribution to the independence and sustainable effectiveness of the national nuclear safety and security regulatory infrastructures. This fifth conference on TSOs will, in particular, present achievements that addressed the recommendations from the previous TSO conferences.

This conference is being organized by the International Atomic Energy Agency (IAEA) in cooperation with the European Technical Safety Organizations Network (ETSON).

## **B. Purpose and Objectives**

The purpose of the conference is to consider how to develop and strengthen technical and scientific capabilities to achieve enhanced nuclear and radiation safety and security of facilities and activities, including operational legacy situations and emerging challenges as well as the exchange and transfer of best practices with nuclear power embarking countries.

The conference will highlight the importance of scientific and technical capabilities to support regulatory decision-making for enhanced nuclear and radiation safety and security. While addressing challenges to the development, maintenance and enhancement of such capacities, the conference will:

- Enhance scientific and technical basis within the regulatory infrastructure for nuclear and radiation safety and security;
- Exchange of best practices and enhance technical and scientific capacities between Member States including embarking countries;
- Enhance scientific knowledge and adaptability for new technologies in a rapidly changing world;
- Promote involvement of young generation in the TSO activities, including TSO awards for young professionals ;

- Encourage Member States to apply the methodology for self-assessment (TOSCA) and enhance their national capability;
- Enhance networking of stakeholders with TSOs notably to foster international collaboration.

## **C. Themes and Topics**

A preliminary programme will be made available on the conference web page well in advance of the conference. The final programme and the Book of Contributed Papers will be available upon registration at the conference.

**The Conference will address the following topics:**

### **1. Current Technical and Scientific Challenges**

- 1.1 Long term operation, periodic safety review (PSR) and licensing beyond design life
- 1.2 Transition to decommissioning, challenges with legacy, unconventional waste management and remediation
- 1.3 Radiation protection and monitoring (including calibration of systems and equipment and record keeping)

### **2. Emerging Technical and Scientific Challenges**

- 2.1 New and emerging technologies (for example: Small Modular Reactors; Fusion; Gamma knife)
- 2.2 Innovative tools and techniques (for example: Artificial Intelligence; Harmonized analytical tools)
- 2.3 Dealing with disruptive events (for example: *Pandemics; External hazards; National emergencies; Climate changes*)

### **3. Interaction of TSOs with Stakeholders**

- 3.1 Regulators and public authorities
- 3.2 Public/civil society
- 3.3 Academia, research institutions and industry

### **4. Scientific and Technical Capacity Building**

- 4.1 Knowledge management and fostering involvement of young professionals
- 4.2 Equity, diversity, and inclusion
- 4.3 Education and training
- 4.4 Research and development (needs, priorities and infrastructure)
- 4.5 TSO self-capacity assessment adopted in different countries

## **5. Role of TSOs in an International Context and for Embarking Countries**

5.1 International cooperation (for example, the Technical and Scientific Support Organization Forum (TSOF)) and use of international experience feedback

5.2 Bilateral and multilateral cooperation (cross-border and regional approaches for example: Emergency Preparedness and Response (EPR); Transportation; Sources)

5.3 Supporting embarking countries and building national TSO capacities (for example: Competence; Technical independence; Conflict of interest)

## **6. Holistic Approach to Risk and Hazard Management**

6.1 Safety and security interface

6.2 Promoting and fostering safety and security culture

6.3 Initiatives on leadership and management

6.4 Graded approach and integrated safety assessment

# **D. Structure**

The conference will consist of an opening session, six topical sessions, special plenary session and a closing session.

To meet the conference's objectives, the conference will include:

- Presentations by the invited keynote speakers
- Presentations to highlight specific areas within each topical session and stimulate discussion among conference participants
- Posters and interactive presentations that present state-of-the-art information and knowledge in the subject area.
- ETSON Award for the young professionals
- TSO Café for networking

### **Opening Session**

This session will include:

- A review of progress in the implementation of the conclusions from previous TSO conferences;
- An update on the revision of the IAEA Safety Standards Series and IAEA Nuclear Security Series publications.

### **Topical Sessions**

- Session 1: Current Technical and Scientific Challenges
- Session 2: Emerging Technical and Scientific Challenges
- Session 3: Interaction of TSOs with Stakeholders

- Session 4: Scientific and Technical Capacity Building
- Session 5: Role of TSOs in an International Context and for Embarking Countries
- Session 6: Holistic Approach to Risk and Hazard Management

### **Special Plenary Session**

The plenary session will present the activities of the TSO Forum and its results (TOSCA)

### **Closing Session**

The closing session will include short presentations followed by a panel discussion during which the Chairperson of the conference and the session chairs will present summaries and highlight key issues related to ensuring effective and sustainable expertise.

## **E. Expected Outcomes**

The expected outcomes of the conference are as stated below:

- Promote the role of TSOs to enhance the nuclear safety and security;
- Promote joint work among the TSOs and in collaboration with stakeholders on the harmonization of nuclear and radiation safety aspects;
- Evaluate feedback for application of the IAEA safety standards;
- Encourage Member States to conduct self-assessment through TOSCA methodology;
- Elaborate common approaches on providing assistance and tools to embarking countries in building and maintaining a science-based regulatory infrastructure;
- Provide an opportunity to exchange views on current and future challenges and share strategies of stakeholders including TSOs to response;
- Strengthen the technical support capabilities for emerging technologies taking into consideration innovative approaches and tools;
- Promote a global culture for safety and security as a basis to ensure holistic approach to risk and hazard, capacity building and continuous improvements in the pursuit of high levels of safety;
- Promote opportunities to increase the dialogue between civil society and technical experts so as to contribute to the trust and confidence in the technical basis supporting regulatory decisions;
- Provide a forum to share experience in order to support the experts of tomorrow and transfer knowledge and skills to young generation;
- Promote effective and sustainable research and its infrastructures to feed and sustain expertise in the long term.

## F. Target Audience

- Conference participants, senior government officials, staff from TSOs, regulators, industry and other stakeholders, as well as technical and scientific experts working in all areas of regulatory functions;
- young professionals, students, youth; and,
- the general public, media, NGOs, academics.

## G. Call for Papers

Contributions on the topics listed in Section C are welcome as oral or poster presentations. All submissions, apart from invited papers, must present original work, which has not been published elsewhere.

### G.1. Submission of Abstracts

Abstracts (approximately 150 to 200 words on one printed A4 page, may contain any charts, graphs, figures and references) should give enough information on the content of the proposed paper to enable the Programme Committee to evaluate it. Anyone wishing to present at the conference must submit an abstract in electronic format using the conference's file submission system ([IAEA-INDICO](#)), which is accessible from the conference web page (see Section Q). The abstract can be submitted through this system from **21 November 2023** until **29 April 2024**. Specifications for the layout will be available on IAEA-INDICO. The system for electronic submission of abstracts, IAEA-INDICO, is the sole mechanism for submission of contributed abstracts. Authors are encouraged to submit abstracts as early as possible. The IAEA will not accept submissions via email.

In addition, authors must electronically submit the following two forms to their appropriate governmental authority using the InTouch+ platform (see Section H) for transmission to the IAEA. These forms must be received by the IAEA no later than **29 April 2024**:

- Participation Form (Form A)
- Form for Submission of a Paper (Form B)

**IMPORTANT:** The Programme Committee will consider uploaded abstracts only if these two forms have been received by the IAEA through the established official channels (see Section H).

### G.2. Acceptance of Abstracts

The Secretariat reserves the right to exclude abstracts that do not comply with its technical or scientific quality standards and that do not apply to one of the topics listed in Section C.

Authors will be informed by **1 July 2024** as to whether their submission has been accepted, either orally or as a poster, for presentation at the conference. Accepted abstracts will also be reproduced in an unedited electronic compilation of Abstracts which will be made available to all registered participants of the conference.

Authors of accepted abstracts will be asked to provide an extended abstract (3 to 5 pages) by **2 September 2024**. Longer manuscripts will only be accepted at the discretion of the Secretariat and only in exceptional cases. Guidelines and a template for the preparation and submission of the extended abstract will be available on IAEA-INDICO.

### G.3 Proceedings

Following the conference, the IAEA will publish a summary report. The proceedings will be made available to read online.

## H. Participation and Registration

All persons wishing to participate in the event must be designated by an IAEA Member State or should be a member of an organization that has been invited to attend.

### Registration through the InTouch+ platform:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):

- Persons with an existing NUCLEUS account can [sign in here](#) with their username and password;
- Persons without an existing NUCLEUS account can [register here](#).

2. Once signed in, prospective participants can use the InTouch+ platform to:

- Complete or update their personal details under ‘Basic Profile’ (if no financial support is requested) or under ‘Complete Profile’ (if financial support is requested) and upload the relevant supporting documents;
- Search for the relevant event (**EVT2300046**) under the ‘My Eligible Events’ tab;
- Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating authority’ (if an invited organization is not listed, please contact [Conference.Contact-Point@iaea.org](mailto:Conference.Contact-Point@iaea.org));
- If applicable, indicate whether a paper is being submitted and complete the relevant information;
- If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
- Based on the data input, the InTouch+ platform will automatically generate Participation Form (Form A), Form for Submission of a Paper (Form B) and/or Grant Application Form (Form C);
- Submit their application.

Once submitted through the InTouch+ platform, the application will be transmitted automatically to the required authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority). If approved, the application will automatically be sent to the IAEA.

**NOTE:** Should prospective participants wish to submit a paper or request financial support, the application needs to be submitted by the specified deadlines (see section O).

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org).

If it is not possible to submit the application through the InTouch+ platform, prospective participants are requested to contact the IAEA’s Conference Services Section via email: [Conference.Contact-Point@iaea.org](mailto:Conference.Contact-Point@iaea.org).

## I. Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the conference. The IAEA has, however, limited funds at its disposal to help cover the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the conference.

If participants wish to apply for a grant, they should submit applications to the IAEA using the InTouch+ platform through their competent national authority (see Section H). Participants should ensure that applications for grants are:

1. Submitted by **29 April 2024**;
2. Accompanied by Grant Application Form (Form C); and
3. Accompanied by Participation Form (Form A).

Applications that do not comply with the above conditions cannot be considered.

Approved grants will be issued in the form of a lump sum payment that usually covers **only part of the cost of attendance**.

## J. Distribution of Documents

A preliminary and final programme will be made available on the conference web page (see Section Q) prior to the start of the conference. The electronic compilation of abstracts will be accessible free of charge to participants registered for the conference.

## K. Exhibitions

In addition to the TSO Café, a limited amount of space will be available for displays/exhibits during the conference. Interested parties should contact the Scientific Secretariat by email [TSO-2024@iaea.org](mailto:TSO-2024@iaea.org) by **29 April 2024**.

## L. Working Language

The working language of the conference will be English. All communications must be sent to the IAEA in English.



## M. Venue and Accommodation

The conference will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted to the VIC premises.

Participants must make their own travel and accommodation arrangements. Hotels offering a reduced rate for participants are listed on <https://www.iaea.org/events>. Please note that the IAEA is not in a position to assist participants with hotel bookings, nor can the IAEA assume responsibility for paying fees for cancellations, re-bookings and no-shows.

## N. Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria as early as three months but not later than four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

For more information, please see the Austria Visa Information document available on <https://www.iaea.org/events>.

## O. Key Deadlines and Dates

Submission of abstracts through IAEA-INDICO	<b>29 April 2024</b>
Submission of Form B (together with Form A) through the InTouch+ platform	<b>29 April 2024</b>
Submission of Form C (together with Form A) through the InTouch+ platform	<b>29 April 2024</b>
Notification of acceptance of abstracts for oral or poster presentation	<b>1 July 2024</b>
Electronic submission of extended abstracts through IAEA-INDICO	<b>2 September 2024</b>
Submission of Form A only (no paper submission, no grant request) through the InTouch+ platform	<b>26 November 2024</b>

## **P. Conference Secretariat**

### **General Postal Address and Contact Details of the IAEA:**

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### **Scientific Secretary of the Conference:**

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### **Administration and Organization:**

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries and correspondence on administrative matters to the IAEA's Conference Services Section.

## **Q. Conference Web Page**

Please visit the IAEA conference [web page](#) regularly for new information regarding this conference.