



# IAEA

*Atoms for Peace and Development*

الوكالة الدولية للطاقة الذرية

国际原子能机构

International Atomic Energy Agency

Agence internationale de l'énergie atomique

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The Secretariat of the International Atomic Energy Agency (IAEA) presents its compliments to the IAEA's Member States and has the honour to draw their attention to the **Technical Meeting on Multi-Unit Probabilistic Safety Assessment** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, from **7 to 10 October 2019**.

The purpose of the event is to share information and obtain feedback on the methodology of multi-unit probabilistic safety assessment (MUPSA) developed and tested within the MUPSA project.

The event will be held in English.

Member States are invited to designate one or more participants for this event. Member States are strongly encouraged to identify suitable women participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet 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 event. The application for financial support should be made at the time of designating the participant(s) using the attached Grant Application Form (Form C).

It should be noted that compensation is not payable by the IAEA for any damage to or loss of personal property. The IAEA also does not provide health insurance coverage for participants in IAEA events. Arrangements for private insurance coverage on an individual basis should therefore be made. The IAEA will, however, provide insurance coverage for accidents and illnesses that clearly result from any work performed for the IAEA.

Designations should be submitted to the IAEA through the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) not later than **15 June 2019** using the attached Participation Form (Form A). Completed and authorized Participation Forms should be sent either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Copies should be sent by email to the Scientific Secretary of the event, Mr Ovidiu Coman, Division of Nuclear Installation Safety, Department of Nuclear Safety and Security (Email: [O.Coman@iaea.org](mailto:O.Coman@iaea.org)), and to the Administrative Secretary, Ms Nadia Nammari (Email: [N.Nammari@iaea.org](mailto:N.Nammari@iaea.org)). The Scientific Secretary of the event will liaise with the participants directly concerning further arrangements, including travel details, as appropriate, once official designations have been received.

Should Governments wish, in addition, to appoint one or more observers to assist and advise the designated participants, they are kindly requested to inform the IAEA of the names and contact details of any such observers by the above date. In accordance with the established rules, Governments are expected to bear the cost of attendance of any observers they may send to IAEA events. Compensation is not payable by the IAEA for any damage to or loss of observers' personal property or for illness, injury or death occurring while travelling to or in connection with their attendance at IAEA events.

The Secretariat of the International Atomic Energy Agency avails itself of this opportunity to assure the IAEA's Member States of its highest consideration.



2019-03-21

Enclosures:            Information Sheet  
                             Participation Form (Form A)  
                             Grant Application Form (Form C)



# **Technical Meeting on Multi-Unit Probabilistic Safety Assessment**

**IAEA Headquarters  
Vienna, Austria**

**7–10 October 2019**

**Ref. No.: EVT1804903**

## **Information Sheet**

### **Introduction**

The use of probabilistic safety assessment (PSA) in supporting decision-making with relation to safety for nuclear power plants is most often based on analyses of single reactor units. However, the majority of reactor units operating have more than one nuclear facility (138 in 192 sites are multi-unit). Safety analyses are usually confined to a single unit, therefore potential accidents involving two or more reactor units, such as the Fukushima Daiichi nuclear accident, are not considered.

While the current practice of safety analyses tends to focus on single reactor units, accidents involving more than one unit are a fundamental factor that need to be addressed. In all accident scenarios, if the accident progression extends outside of the reactor unit, the risk of inducing or exacerbating events on other units may need to be considered. Ultimately the risk to the public from a given site is characterized by the aggregated risks of all potential on-site risk contributors. Therefore, understanding the complete risk profile of multi-unit sites would require a combined representation of risks across the various units on-site.

Determining the risk factors for multi-unit sites using PSA requires explicit modelling of the interactions, with positive and negative effects, between the units in a manageable manner, and a delineation of single unit and multi-unit accident sequences.

Responding to the request of Member States, in December 2016, the Division of Nuclear Installation Safety (NSNI) of the International Atomic Energy Agency (IAEA) launched a multi-unit probabilistic safety assessment (MUPSA) project coordinated by the External Events Safety Section and Safety Assessment Section. Within the framework of this project, the experiences of MUPSA available in Member States have been carefully analysed and a detailed methodology for developing Level 1 MUPSA was established and tested using a complex case study. The detailed methodology illustrated by the case study will be documented in a safety report that will be presented to meeting participants for comments and discussion.

## **Objectives**

The purpose of the meeting is to share information regarding both the current state of practices at the international level and the draft safety report based on the outcome of the IAEA MUPSA project.

Furthermore, the IAEA/NSNI is seeking feedback from Member States to be used for further improvements to the safety report, and to initiate the revision process for existing IAEA publications in order to bring them in line with current international practices and experiences related to multi-unit risk assessment.

## **Target Audience**

Participation is solicited from nuclear safety professionals (PSA practitioners, decision makers and senior managers) from nuclear power plant design and operating organizations, regulatory bodies and technical support organizations, as well as consultants who are engaged in activities related to PSA development and applications for nuclear installations. To ensure maximum effectiveness in the exchange of information, participants should be persons actively involved in the subject areas of the meeting.

The meeting is open to representatives of all Member States with an active nuclear programme, including those that are building their first nuclear power plant or expanding an existing nuclear power programme. Participants should be intimately familiar with the details of their country's national practice in relation to probabilistic risk assessment to support safety decisions.

## **Working Language(s)**

The working language of the meeting will be English. No simultaneous interpretation will be provided.

## **Expected Outputs**

The proceedings of the meeting will be made available in electronic format.

## Topics

The meeting will address the following topics:

- IAEA/NSNI project on MUPSA;
- Members States' experiences of MUPSA; and
- Potential use of MUPSA approaches for small and medium sized reactors.

The plenary session of the meeting will open with a presentation on the IAEA/NSNI MUPSA project, followed by presentations given by selected keynote speakers and representatives of various countries and organizations on their experiences related to the above topics.

## Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **15 June 2019**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Please note that the IAEA is in a transition phase to manage the entire registration process for all regular programme events electronically through the new InTouch+ (<https://intouchplus.iaea.org>) facility, which is the improved and expanded successor to the InTouch platform that has been used in recent years for the IAEA's technical cooperation events. Through InTouch+, prospective participants will be able to apply for events and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to: [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org).

## Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed in the Topics Section above.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 2 pages (including figures and tables) and should not exceed 2400 words. It should be sent electronically to Mr Ovidiu Coman, the Scientific Secretary of the event (see contact details in the IAEA Contacts Section), not later than **15 June 2019**. Authors will be notified of the acceptance of their proposed presentations by **15 September 2019**.

In addition, participants have to submit the abstract together with the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or their organization for onward transmission to the IAEA not later than **15 June 2019**.

## 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 event. The IAEA has, however, limited funds at its disposal to help meet 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 event.

The application for financial support should be made using the **Grant Application Form (Form C)** which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **15 June 2019**.

## Venue

The event will be held at the Vienna International Centre (VIC) where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

<http://www-pub.iaea.org/iaeaevents/GeneralInfo/Guide/VIC>.

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.

## Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least 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.

# IAEA Contacts

## Scientific Secretaries:

### Mr Ovidiu Coman

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### Mr Shahen Poghosyan

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Email: [S.Poghosyan@iaea.org](mailto:S.Poghosyan@iaea.org)

## Administrative Secretary:

### Ms Nadia Nammari

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Department of Nuclear Safety and Security  
International Atomic Energy Agency  
Vienna International Centre  
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AUSTRIA

Tel.: +43 1 2600 22518

Fax: +43 1 26007

Email: [N.Nammari@iaea.org](mailto:N.Nammari@iaea.org)

Subsequent correspondence on scientific matters should be sent to the Scientific Secretary/Secretaries and correspondence on other matters related to the event to the Administrative Secretary.



# Participation Form

## Technical Meeting on Multi-Unit Probabilistic Safety Assessment

**IAEA Headquarters, Vienna, Austria**

**7–10 October 2019**

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: [Official.Mail@iaea.org](mailto:Official.Mail@iaea.org) or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [O.Coman@iaea.org](mailto:O.Coman@iaea.org) and to the Administrative Secretary [N.Nammari@iaea.org](mailto:N.Nammari@iaea.org).

Please attach a passport copy or other document of identification (ID).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

**Deadline for receipt by IAEA through official channels: 15 June 2019**

Family name: (e.g. Smith)	First name(s): (e.g. John)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable: Do you intend to submit a paper?                      Yes                      No Would you prefer to present your paper as a poster?    Yes                      No Title:		



# Grant Application Form

## Technical Meeting on Multi-Unit Probabilistic Safety Assessment

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**Deadline for receipt by IAEA through official channels: 15 June 2019**

Family name: (e.g. Smith)	First name(s): (e.g. John)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yyyy/mm/dd):	Nationality:	

### 1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from                  to	

### 2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years attended from                  to	

### 3. Description of work performed over the last three years:

### 4. Institute's/Member State's programme in field of event:

**Date:** \_\_\_\_\_ **Signature of applicant:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Name, signature and stamp of Ministry of Foreign Affairs,  
Permanent Mission to the IAEA or National Atomic Energy  
Authority**

\_\_\_\_\_