



# **Technical Meeting on Design Safety, Safety Assessment and Regulatory Activities to Facilitate Further Development and Future Deployment of Fusion Facilities**

**Hosted by the  
Government of Spain**

**through the**

**International Fusion Materials Irradiation Facility  
DEMO Oriented Neutron Source (IFMIF-DONES)**

**Granada, Spain**

and virtual participation via Microsoft Teams

**2–6 June 2025**

**Ref. No.: EVT2405228**

## **Information Sheet**

### **Introduction**

Currently, many Member States have expressed growing interest in developing fusion facilities to pave the way for their future use as a clean and sustainable energy source. To meet these expectations, the public and private sectors are joining forces to support research and development of scientific and technological solutions to address the challenges of fusion. These efforts have led to the creation of several fusion facility designs in different Member States, as well as related research centres focused on plasma and materials sciences.

The IAEA plays a key role in ensuring the peaceful, safe, and secure use of nuclear energy. It has been actively supporting and promoting fusion energy research and development activities. This support includes facilitating the exchange of information among stakeholders on various relevant areas, such as the development of data on fusion processes, phenomena, materials, and plasma science; regulatory and licensing frameworks; design safety and safety assessment requirements and guidance; and waste management, among others.

While significant progress has been made in technological development and scientific knowledge in recent years, there remains a lack of consensus on regulatory and licensing frameworks, as well as on design safety and safety assessment requirements and guidance for fusion facilities.

Considering the IAEA's Fundamental Safety Principles, where Principle 2 states that "A properly established legal and governmental framework provides for the regulation of facilities and activities that give rise to radiation risks and for the clear assignment of responsibilities," and Principle 8 states that "all practical measures must be made to prevent and mitigate nuclear and radiation risks," Member States developing fusion facilities should make every effort to adhere to these principles.

Given that the IAEA has prepared several publications compiling experiences and practices from Member States that are more advanced in the design, construction, and operation of demonstration fusion facilities, it is expected that discussions among experts and stakeholders from all invited Member States to this meeting will contribute to ongoing efforts to strengthen nuclear safety by facilitating the harmonization of relevant approaches used in Member States for fusion.

The outcomes from this meeting will contribute to the preparatory work currently underway for the future production of IAEA Safety Standards for fusion, particularly in the areas of regulation, design safety, and safety assessment.

## **Objectives**

The objective of the event is to provide participants with a platform to share experiences from Member States and discuss challenges related to establishing regulatory frameworks, design safety, and safety assessment requirements and recommendations for fusion facilities.

Special emphasis will be placed on discussing the content of the draft Safety Report Series "Safety and Regulation Considerations for Fusion Facilities" (in preparation) and on collecting experiences that could form the basis for consensus among Member States. This consensus will be crucial for the future production of IAEA Safety Standards for fusion, particularly in the areas of regulation, design safety, and safety assessment.

## **Target Audience**

The event is targeted at professionals from design organizations, operating organizations, nuclear regulatory authorities, technical support organizations, and research institutions who are engaged in activities related to or in support of the design, operation, and research and development of fusion

facilities. Particular emphasis will be placed on the regulatory and licensing process, design safety, and safety assessment. Specific areas of focus are listed in the Topics section below.

The event is open to representatives from all Member States with an active research program in fusion energy, including those from Member States that have expressed interest in starting to acquire knowledge on fusion research and technologies.

## **Working Language(s)**

English.

## **Expected Outputs**

Participants will gain a better understanding of the various challenges, advantages, and limitations related to developing a regulatory framework, licensing process, design safety, and safety assessment for fusion facilities, based on current practices in Member States. The information exchanged will serve as the foundation for future development of IAEA publications on regulatory frameworks, design safety, and safety assessment for fusion facilities.

Additionally, the results of the discussions from the event are expected to contribute to the revision and finalization of the Safety Report Series “Safety and Regulation Considerations for Fusion Facilities”.

## **Topics**

The event will address experiences collected from Member States to overcome challenges and limitations concerning the regulatory framework, licensing process, design safety, and safety assessment for fusion facilities. Key topics include:

- Use and application of IAEA Safety Standards to fusion facilities at the design and licensing stages in the regulatory decision-making process;
- Phenomena, safety challenges, and initiating events associated with fusion facility operations;
- Challenges concerning material selection;
- Safety functions and safety classification of engineering safety features;
- Considerations for applying the graded approach, defence in depth, and practical elimination concepts to fusion facilities during the design and licensing process;
- Application of design safety principles to fusion facilities to meet the fundamental safety objective;
- Overcoming the lack of information concerning operating procedures and accident management guidelines;
- Deterministic and probabilistic approaches for demonstrating the safety level of the design of fusion facilities;
- Applicable regulatory frameworks;

- Licensing processes for future fusion facilities;
- Regulatory readiness for future fusion facilities.

## 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 or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **11 April 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
  - Persons with an existing NUCLEUS account can sign in to the platform 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 ‘Complete Profile’ and upload the relevant supporting documents;
  - Search for the relevant event 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 [InTouchPlus.Contact-Point@iaea.org](mailto:InTouchPlus.Contact-Point@iaea.org));
  - 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 the Participation Form (Form A) and/or the Grant Application Form (Form C);
  - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **11 April 2025**.

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).

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

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency’s Personal Data and Privacy Policy](#) and are collected solely for the purpose(s) of reviewing

and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

## Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed 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 two pages (including figures and tables) and should not exceed 1500 words. It should be sent electronically to Mr Jorge Luis Hernández and Mr Mirko Ascic, the Scientific Secretaries of the event (see contact details below), not later than **11 April 2025**. Authors will be notified of the acceptance of their proposed presentations by **2 May 2025**.

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 **11 April 2025**.

## 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, together with the submission of the application, by **11 April 2025**.

## Venue

The event will be held at the Parque de las Ciencias. Avda. de la Ciencia s/n 18006 Granada. España. Participants must make their own travel and accommodation arrangements.

## Visas

Participants who require a visa to enter Spain should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Spain.

## **IAEA Contacts**

### **Scientific Secretaries:**

#### **Mr Jorge Luis Hernández**

Division of Nuclear Installation Safety  
Department of Nuclear Safety and Security  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 24568

Fax: +43 1 26007

Email: [Jorge.Luis-Hernandez@iaea.org](mailto:Jorge.Luis-Hernandez@iaea.org)

#### **Mr Mirko Ascic**

Division of Nuclear Installation Safety  
Department of Nuclear Safety and Security  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22658

Fax: +43 1 26007

Email: [Mirko.Ascic@iaea.org](mailto:Mirko.Ascic@iaea.org)

### **Administrative Secretary:**

#### **Mr Paulo Sales Barbosa**

Division of Nuclear Installation Safety  
Department of Nuclear Safety and Security  
International Atomic Energy Agency  
Vienna International Centre  
PO Box 100  
1400 VIENNA  
AUSTRIA

Tel.: +43 1 2600 22687

Fax: +43 1 26007

Email: [p.sales-barbosa@iaea.org](mailto:p.sales-barbosa@iaea.org)

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

## **Event Web Page**

Please visit the following IAEA web page regularly for new information regarding this event:

[www.iaea.org/events/EVT2405228](http://www.iaea.org/events/EVT2405228)



# Participation Form

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**Granada, Spain**

**2 to 6 June 2025**

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, Mr Jorge Luis Hernandez, Division of Nuclear Installation Safety, Department of Nuclear Safety and Security (Email: [J.Luis-Hernandez@iaea.org](mailto:J.Luis-Hernandez@iaea.org)) and to the Administrative Secretary, Mr Paulo Sales Barbosa, (Email: [P.Sales-Barbosa@iaea.org](mailto:P.Sales-Barbosa@iaea.org)).

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: 11 April 2025**

Family name(s): (same as in passport)	First name(s): (same as in passport)	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 presentation? Yes <input type="checkbox"/> No <input type="checkbox"/> Title: I plan to attend virtually: Yes <input type="checkbox"/> No <input type="checkbox"/>		

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.



# Grant Application Form

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**Deadline for receipt by IAEA through official channels: 11 April 2025**

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/M:
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**

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