



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

Международное агентство по атомной энергии

Organismo Internacional de Energía Atómica

Vienna International Centre, PO Box 100, 1400 Vienna, Austria

Phone: (+43 1) 2600 • Fax: (+43 1) 26007

Email: Official.Mail@iaea.org • Internet: <https://www.iaea.org>

In reply please refer to: **EVT2103079**

Dial directly to extension: (+43 1) 2600-22808/24236

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 Synergies Between Nuclear Fusion Technology Developments and Advanced Nuclear Fission Technologies** (hereinafter referred to as "event") to be held at the IAEA's Headquarters in Vienna, Austria, with the option of virtual participation via Webex from **6 to 10 June 2022**.

The purpose of the event is to provide a forum for the exchange of information on, as well as to present an up-to-date review of, activities related to synergies in technology development between nuclear fission and fusion for energy production at the national and international levels. The event will also be used to present the work already done by the Secretariat.

The attached Information Sheet provides further details of the event.

The event will be held in English.

Member States are invited to designate one or more participants to represent the Government at 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 **1 March 2022** using the attached Participation Form (Form A). Completed and authorized Participation Forms should be sent either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Copies should be sent by email to the Scientific Secretaries of the event, Mr Vladimir Kriventsev, Division of Nuclear Power, Department of Nuclear Energy (Email: V.Kriventsev@iaea.org), and Ms Sehila M. Gonzalez de Vicente, Division of Physical and Chemical Sciences, Department of Nuclear Sciences and Applications (S.M.Gonzalez-De-Vicente@iaea.org) and to the Administrative Secretary, Ms Khurshida Abdurasulova (Email: K.Abdurasulova@iaea.org). The Scientific Secretary of the event will liaise with the participants directly concerning further arrangements, including travel details, as appropriate, once the 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 renew to the IAEA's Member States the assurances of its highest consideration.



2022-01-06

Enclosures: Information Sheet
 Participation Form (Form A)
 Form for Submission of a Paper (Form B)
 Grant Application Form (Form C)



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Technical Meeting on Synergies Between Nuclear Fusion Technology Developments and Advanced Nuclear Fission Technologies

IAEA Headquarters, Vienna, Austria
and virtual participation via Cisco Webex

6–10 June 2022

Ref. No.: EVT2103079

Information Sheet

Introduction

The International Atomic Energy Agency (IAEA) aims to support and strengthen its Member States' capabilities in the field of technology development of nuclear fission and fusion for energy production.

With the aim to address the resolution of the IAEA General Conference GC64 and the Standing Advisory Group on Nuclear Energy (SAGNE) recommendation and taking into account the worldwide acceleration towards the early deployment of nuclear fusion for energy production, it is the appropriate time for the IAEA to launch a new initiative aimed at addressing the great engineering challenge of fusion, by promoting transfer of technology and know-how from fission to fusion. In other words, the IAEA is in the best position to identify and analyse, with an international perspective, all the possible synergies on technology development and deployment between nuclear fission and nuclear fusion.

The fission based nuclear power plants have a long history of development and operational experience; the advanced nuclear fission reactors are at an early stage of deployment and several lessons are being learned in the process of their development. It is expected that the development of future fusion based

nuclear power plants for energy production will face many challenges already well-known and addressed for the deployment of nuclear fission power technology, from design to construction to decommissioning through operation, including, infrastructure needs and economic competitiveness. While the fusion technology is rapidly maturing through the realization of large experimental facilities like ITER and other innovative fusion machines (also funded by the private sector), it is of paramount importance to develop a thorough techno-economic understanding of the subject matter for an optimized and well-informed development path of nuclear fusion power plants.

Member States and stakeholders will benefit from better understanding of the synergies between fission and fusion; they will also get acquainted of the status of cooperation between the two communities and will receive recommendations on how to enhance relevant technology and knowledge transfers from fission to fusion.

Objectives

Objectives of the event are:

- Promote and facilitate the exchange of information on synergies between advanced nuclear fission and fusion technologies;
- Summarize the current status of cooperation between fission and fusion technology development, presenting up-to-date information and material;
- Present the work already done by the chapter leaders to develop the NES publication;
- Document the discussions and major findings among subject matter experts to support Member States to better understand and benefit from the synergies between fission and fusion;
- Distribute the tasks to finalize the different chapters/sections of the document.

The NES publication will provide insight on all these areas as well as examples of good practices and lessons learned and will offer suggestions to accelerate the transfer of technology, knowledge, and know-how from fission to fusion.

Target Audience

The meeting is open to all Member States involved or interested in the research and development of fission and/or fusion technology and their synergies, including government organizations (policymakers, analysts, regulators, and R&D agencies) and industry stakeholders (vendors, engineering companies, plant operators and technology developers).

Working Language

The working language of this meeting will be English with no interpretation provided. All communications, abstracts and papers must be submitted in English.

Expected Outputs

The expected outputs are:

- Recommendations to the IAEA on how to enhance relevant technology and knowledge transfers from fission to fusion;
- A first draft (extended abstracts from 2 to 5 pages) per topic to develop the chapters for the IAEA publication describing the current status of cooperation between fission and fusion technology development.

Topics

The event will consist of presentations and discussions at technical sessions. All contributions will be categorized based on the following topics:

1. Status of fusion technology: needs and challenges
2. Scenario studies: nuclear fusion reactors as an element of future energy systems
3. Technology, safety, security and safeguardability for synergies and know-how transfer:
 - Energy conversion systems
 - Structural materials and circulating fluids (Neutron irradiation resistant materials, Temperature stable materials, Compatibility with circulating fluids and mitigation strategies, Protective coatings, Corrosion resistant materials, Fluid handling and purification)
 - Waste technology
 - Decommissioning by design

- Fuel cycle
 - Detritiation technologies
 - Remote handling
 - Diagnostics, instrumentation, and other experimental techniques
 - Nuclear data
 - Modelling and simulations
 - Design Safety, Safety Analysis and Regulation (Introduction and scope, Regulatory, Design Safety, Safety Analysis, External Hazards, Emergency Preparedness and Response)
 - Project management and management systems
 - Manufacturing and supply chain
 - Construction and commissioning
 - Operation and maintenance
 - Safeguards
4. Economic and market considerations
 - Economics of energy systems
 - Lessons learned from 70 years of nuclear fission reactors deployment
 - Economic and market considerations on nuclear fusion power plants
 5. Human Resources and Knowledge management
 - Mapping human resources needs and identification of common professional competencies
 - Knowledge management strategies and techniques
 6. Fission-fusion hybrid systems
 7. General considerations on needed infrastructure
 8. Stakeholder involvement
 - Start-ups
 - Public acceptance and support
 9. Considerations and suggestions for future work in the field.

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 **1 March 2022**. 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 above deadline.

Selected participants will be informed in due course on 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 is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required.

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 **1 March 2022**.

Venue

The event will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Optionally, virtual participation via Cisco Webex will be provided. 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:

www.iaea.org/events.

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.

Extended Abstracts

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 extended abstract of their work on the session topics listed above.

The extended abstract should contain title, contributing author(s) names and affiliation, must be written in English, and provide sufficient information on the contents of the proposed paper for evaluation. The extended abstract will be reviewed as part of the selection process for presentations. The extended abstract (2-5 pages in length) should be written in Microsoft Word format using the attached template. It should be uploaded to INDICO website (<https://conferences.iaea.org/event/285>) not later than **1 March 2022**. Authors will be notified of the acceptance of their proposed presentations by **1 April 2022** and provided with peer-review feedback. The authors will then be requested to submit revised extended abstracts by **1 June 2022**.

The extended abstract should be submitted together with the Participation Form (Form A) and the attached Form for Submission of a Paper (Form B) 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 **1 March 2022**.

Key Deadlines and Dates

ACTION	DATE
Extended abstract submission deadline / Start of peer review;	1 March 2022
Submission of the Participation Form (Form A) Submission of the Form for Submission of a Paper (Form B); Submission of the Grant Application Form (Form C), if applicable	
Notification of acceptance of extended abstract by the IAEA	1 April 2022
Review comments submitted to authors	1 May 2022
Revised extended abstract submission deadline	1 June 2022
Technical Meeting in Vienna (Austria)	6–10 June 2022

IAEA Contacts

Scientific Secretaries:

Mr Vladimir Kriventsev

Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 22808

Fax: +43 1 26007

Email: V.Kriventsev@iaea.org

Ms Sehila M. Gonzalez de Vicente

Division of Physical and Chemical Sciences
Department of Nuclear Sciences and Applications
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600-21753

Fax: +43 1 26007

Email: S.M.Gonzalez-De-Vicente@iaea.org

Administrative Secretary:

Ms Khurshida Abdurasulova

Division of Nuclear Power
Department of Nuclear Energy
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 24236

Fax: +43 1 2600 29598

Email: K.Abdurasulova@iaea.org

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

Participation Form

Technical Meeting on Synergies Between Nuclear Fusion Technology Developments and Advanced Nuclear Fission Technologies

IAEA Headquarters, Vienna, Austria

6–10 June 2022

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 or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary V.Kriventsev@iaea.org and to the Administrative Secretary K.Abdurasulova@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: 1 March 2022

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 paper?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Would you prefer to present your paper as a poster?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Title:		

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. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Form for Submission of a Paper

Technical Meeting on Synergies Between Nuclear Fusion Technology Developments and Advanced Nuclear Fission Technologies

IAEA Headquarters, Vienna, Austria

6–10 June 2022

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Deadline for receipt by IAEA through official channels: 1 March 2022

Title of the paper:		
If applicable: Extended abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s): e.g. Smith, John	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name and first name(s) of author presenting the paper: e.g. Smith, John	Mr/Ms:	
Mailing address:		
Tel. (Fax):		
Email:		

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- the non-exclusive, worldwide, free-of-charge licence (this option is only for those authors whose parent institution does not allow them to transfer the copyright for work carried out in that institution) granting the IAEA world rights for the use of the aforementioned material in this and any future editions of the publication, in all languages, and in all formats available now, or to be developed in the future (digital formats, hard copy etc.).

Please note: Please select only one of two options above. If granting the licence mentioned above, please supply any copyright acknowledgement text required.

Furthermore, I herewith declare:

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- that any permissions and rights to publish required for third-party content, including but not limited to figures and tables, have been obtained, that all published material is correctly referenced; and
- that the material submitted to the IAEA does not contain any libellous or other unlawful statements and does not contain any materials that violate any personal or proprietary rights of any person or entity.

Date:

Signature of main author:

Grant Application Form

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Deadline for receipt by IAEA through official channels: 1 March 2022

Family name(s): (same as in passport)	First name(s): (same as in passport)	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 worked	
			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
