



# **Joint IAEA – GIF Workshop on the Safety of Non-Water Cooled Reactors**

**IAEA Headquarters, Vienna, Austria**

and virtual participation via Microsoft Teams

**30 June – 4 July 2025**

**Ref. No.: EVT2404397**

## **Information Sheet**

### **Introduction**

The International Atomic Energy Agency (IAEA) and the Generation IV International Forum (GIF) have jointly committed to collaborate between their respective programmes, and share information in selected areas of mutual interest. One of the key areas of focus for both the GIF and the IAEA is the safety of liquid metal cooled fast reactors (LMFRs) – including sodium cooled fast reactors (SFRs) and lead cooled fast reactors (LFRs) – high temperature gas cooled reactors (HTGRs) and molten salt reactors (MSRs). A particularly important area of mutual interest is the harmonization of safety approaches, safety requirements, Safety Design Criteria (SDC) and Safety Design Guidelines (SDG) developed since 2011 within the GIF, as well as the applicability of IAEA safety standards for the next-generation of advanced non-water cooled reactors (NWCRs) under development worldwide.

Within the framework of this collaboration, ten joint IAEA–GIF technical workshops on the safety of SFRs have been held since 2010. The meetings organised since 2018 also covered LFRs. Two joint IAEA–GIF meetings on the safety of HTGRs have been held in 2019 and 2022. The meeting organised in 2022 also covered MSRs. One meeting on the safety of NWCRs, including SFRs, LFRs, HTGRs and MSRs, took place in 2023.

Building on the outcome of previous abovementioned IAEA-GIF meetings, this workshop will focus on the safety of SFRs, LFRs, HTGRs and MSRs.

Outcomes from this workshop will support the development of an international repository of knowledge to enhance global understanding of the safety of NWCRs, and to contribute to the future development of the IAEA safety standards.

## **Objectives**

The main objectives of this workshop are to:

- Share technical information on the development and implementation of GIF's SDC and SDG, for SFRs, LFRs, and VHTRs (very high temperature reactors);
- Share information on the application of IAEA design safety and safety assessment standards to SFRs, LFRs, HTGRs and MSR;
- Share information on the safety approaches and on design solutions implemented in LMFRs and HTGRs in operation and under development for new LMFRs and HTGRs;
- Share experience on the safety approaches and on design solutions under development for MSR;
- Share information on the risk-informed performance-based approach for design safety;
- Share experience in development of licensing frameworks and regulatory reviews for LMFRs, HTGRs and MSR.

## **Target Audience**

The event is targeted at professionals from organizations involved in the design of nuclear power plants (NPPs), operating organizations, nuclear regulatory authorities, technical support organizations, and research institutions that are engaged in activities related to or in support of the development or the regulation of LMFR, HTGR and MSR designs.

The event is open to representatives of all Member States with an active nuclear power programme, including those from embarking countries in an advanced stage of their nuclear programme.

## **Working Language(s)**

English.

## **Expected Outputs**

The outputs of the meeting will include:

- A common view among the participants on IAEA and GIF activities on the safety of NWCRs as well as a strengthened cooperation between the two organizations.
- Information and feedback contributing to the development of the TECDOCs: “Considerations on the Safety of Liquid Metal Fast Reactors”, “Considerations on the Safety of HTGRs”, “Considerations on the Safety of MSR”, “Safety Considerations in Non-Water-Cooled Reactors Core Design”, and “Demonstration of DiD Implementation using Deterministic and Probabilistic Approaches”.
- A step forward in common understanding of the safety approaches implemented for NWCRs, including Risk Informed Performance Based approaches, in particular concerning the specific characteristics of these technologies, with a focus on design extension conditions (including severe accidents) and practically eliminated accident conditions. Designers’ and regulators’/TSOs’ perspectives are both key in this regard.

## Topics

Topics to be discussed will include:

- Designers’ and regulators’/TSOs’ experience in the consideration of GIF’s SDC and SDG;
- Application of IAEA design safety and safety assessment standards to NWCRs, including the current program of work aimed at updating these standards;
- Relevant operating experience related to LMFRs, HTGRs and MSR;
- Safety-related insights of the regulatory review of NWCRs;
- Safety aspects of LMFRs, HTGRs and MSR (in operation, when applicable, as well as in the design phase), including:
  - The fulfilment of the fundamental safety functions;
  - The application of defense in depth;
  - Design extension conditions, including severe accidents;
  - The practical elimination of accident conditions;
  - Advanced manufacturing and qualification programmes for new materials;
  - Performance assessment and regulation of passive safety features;
  - Mechanistic source term (MST) assessment methodologies;
  - Safety-Security-Safeguards (3S) interfaces.
  - Experimental programmes supporting the validation of numerical computer codes for design safety and safety assessment.

## 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 **28 March 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 **28 March 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 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. 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.

## **Presentations**

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

Participants who wish to provide 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 Vincenzo Tiberi, the Scientific Secretary of the event (see contact details below), not later than **28 April 2025**. Authors will be notified of the acceptance of their proposed presentations by **28 May 2025**.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the abstract to their competent national authority (e.g., Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA not later than **28 March 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 **28 March 2025**.

## 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:

<https://www.iaea.org/events/evt2404397>

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 Secretary:**

#### **Mr Vincenzo Tiberi**

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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.

## **Event Web Page**

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

<https://www.iaea.org/events/evt2404397>