



IAEA

International Atomic Energy Agency
Atoms for Peace and Development

Technical Meeting on Analytical Tools and Methods in Pressurized Heavy Water Reactor Analysis

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

25-28 November 2025

Ref. No.: EVT2404343

Information Sheet

Introduction

Pressurized Heavy Water Reactors (PHWRs) are currently in operation across six Member States (MSs) – Argentina, Canada, China, India, Romania, and the Republic of Korea – while under decommissioning in Pakistan. As in all MSs, the demand for rigorous and accurate safety assessments has grown significantly driven by the need to comply with more stringent requirements, addressing emerging issues and demonstrating sufficient margins throughout the life of the plants. Combined with increased computer capabilities, this has led to the development and adoption of sophisticated analytical tools, methods, and integrated simulation platforms for PHWR analysis.

The International Atomic Energy Agency (IAEA) has actively supported PHWR MSs in enhancing computational tools and methods while promoting information exchange on the topic. These efforts include convening technical meetings, publishing technical documents, and fostering collaborative research projects and benchmarks. Recent examples include:

- Benchmarking Severe Accident Computer Codes for Heavy Water Reactor Applications, IAEA-TECDOC-1727 (2013)
- International collaborative standard problem (ICSP) on Heavy Water Reactor Moderator Effectiveness as a Backup Heat Sink During Accident, IAEA-TECDOC-1890 (2019)
- Numerical Benchmarks for Multiphysics Simulation of PHWR which outcomes that concluded in the issuance of the IAEA-TECDOC-1994 (2022).
- Technical Meeting in 2022 on Severe Accident Simulation and Modelling which outcomes have being recently published in IAEA-TECDOC-2077, Advances in Severe Accident Simulation and Modelling for Pressurized Heavy Water Reactors (2024).

Building on these activities, the IAEA is organizing a technical meeting to share information on the recent advances in analytical tools and methods for PHWR analysis.

Objective

The overall objective of this Technical Meeting is to share experience and transfer knowledge on the advances and future trends in Analytical Tools and Methods for PHWR analysis, and to prepare an IAEA publication on the topic.

Target Audience

Participation is intended for professionals from nuclear power plant design and operating organizations, regulatory bodies, and other technical support, research and academic organizations who are involved in usage, development and validation of analytical tools and methods in PHWRs.

Working Language

English.

Expected Outputs

The expected outputs of this meeting are as follows:

- Meeting report and subsequent development an IAEA publication summarizing the participants' contributions and discussions held.
- Definition of potential future of IAEA led international collaboration activities on the topic.

Topics

The meeting addresses the advances in analytical tools and methods for design, operation and safety analysis of PHWR for all plant states. More specifically, the topics planned to be covered in the meeting include:

- Advances in computational tools and integrated simulation platforms for PHWRs.
- Usage of high-fidelity tools, such as Computational Fluid Dynamics (CFD).
- Applications of artificial intelligence and machine learning.
- Novel methodologies and approaches, such as ROP approaches, and the application of the LBB concept and pipe break opening characteristics.
- Progress in experiments, validation, uncertainty quantification and benchmarks.

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 **15 September 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);
 - 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 **15 September 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.

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.

Papers and Presentations

The IAEA encourages participants to submit technical papers and 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. All contributions will be reviewed as part of the selection process for presentations. The manuscript should be in A4 page format, should extend to no more than two pages. The abstracts should be sent electronically to Ms Eve-Lyne Pelletier, the Scientific Secretary of the event (see contact details below), not later than **15 September 2025**. Authors will be notified of the acceptance of their proposed abstracts and papers by **15 October 2025**. Authors are then requested to submit a full paper to the Scientific Secretary of the event no later than **15 November 2025**. The technical papers should extend to no more than 12 pages (including figures and tables).

Submission of a paper should be confirmed, together with the submission of the main application via the InTouch+ platform, by **15 September 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 **15 September 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:

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.

IAEA Contacts

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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.