Interregional Training Course on Nuclear Reactor Technology Assessment

Hosted by

The International Atomic Energy Agency (IAEA)

Vienna, Austria
10-14 November 2025

Ref. No.: TN-INT2024- EVT2500469

Information Sheet

Purpose

The purpose of the event is to train the participants to strengthen capacity-building and enhance awareness, and knowledge on the application of Nuclear Reactor Technology Assessment (RTA) methodology for large-scale Nuclear Power Plants (NPPs) with advanced water-cooled reactors.

Working Language

The training course will be conducted in English

Deadline for Nominations

Nominations received after **1 July 2025** will not be considered.

Project Background

The use of nuclear power as a source of energy is increasing globally, with many countries introducing or expanding their nuclear power programmes. Such programmes require a long-term commitment and a national nuclear infrastructure that provides governmental, legal, regulatory, institutional, managerial, technological, human resource, industrial and stakeholder support throughout its life cycle. The adherence to international legal instruments, and the adoption of internationally accepted nuclear safety standards, nuclear security guidance and safeguards requirements are essential in establishing a responsible nuclear power programme. It is each country's sovereign decision whether to include nuclear power in its national energy mix. However, when countries proceed with this option, the IAEA is ready to support them through a variety of activities and services to do so safely, securely, and sustainably.

Currently, the IAEA provides nuclear infrastructure development training to its Member States through a number of mechanisms. Through the Technical Cooperation programme, Member States benefit from training at the national, regional, and interregional level. The majority of the training provided on the introduction of nuclear power is general in nature and cuts across the 19 infrastructure issues. In this respect, the interregional projects are an important mechanism, delivering support across national and regional boundaries and addressing the common needs of different regions. The interregional approach through INT2024–NPID is then necessary to streamline the IAEA support in this area.

IAEA Nuclear Energy Series No. NG-G-3.1 (Rev. 2), Milestones in the Development of a National Infrastructure for Nuclear Power, first issued in 2007 and last updated in 2024, defines three milestones in the development of infrastructure and provides detailed guidance for 19 specific infrastructure issues ranging from a government's national position on nuclear power to the procurement of items and services for the first nuclear power plant. The guidance in that publication is referred to here as 'the Milestones approach'.

The development of the infrastructure for a nuclear power programme includes the establishment of policies and strategies in areas such as human resource development, nuclear fuel cycle and waste management, industrial involvement, and nuclear safety. A legal and regulatory framework that creates an environment enabling the project to be implemented in a transparent and effective manner will also need to be established.

Scope and Nature

Nuclear Reactor Technology Assessment (RTA) is a structured methodology developed by the IAEA to assist Member States in evaluating and selecting the most suitable nuclear reactor technology for near-term deployment. The RTA process is designed to provide decision-makers with a systematic approach to assess various technological options based on key technical, economic, regulatory, and infrastructure considerations. It plays an important role in the broader context of nuclear power infrastructure development, ensuring that technology choices align with national policy objectives and long-term sustainability goals.

Since its initial publication in 2013, the RTA methodology has been continuously refined to incorporate emerging trends in nuclear technology, including advancements in large water cooled reactors. It integrates feedback from training workshops and country-specific assessments to address the evolving needs of embarking and expanding nuclear power programs. The RTA framework supports Member States in conducting feasibility studies, preparing bid specifications, and selecting reactor designs that meet stringent safety, economic, and operational criteria.

The training course will provide a comprehensive overview of the IAEA RTA methodology, focusing on large-scale NPPs with advanced water cooled reactors. Participants will gain practical insights into the RTA methodology, enabling informed decision-making in identifying, evaluating, and selecting reactor technologies aligned with national nuclear power program objectives. Through expert-led lectures, case studies, and hands-on exercises, participants will:

- Understand the fundamental principles and objectives of reactor technology assessment.
- Explore the technical and economic considerations influencing reactor technology selection.
- Learn how to apply the IAEA RTA methodology to national nuclear power programs.
- Engage in practical exercises using the IAEA RTA IT Toolkit to conduct assessments.
- Discuss best practices and lessons learned from RTA applications.

The course will also facilitate interactive discussions and networking opportunities among participants, fostering collaboration and knowledge-sharing on reactor technology assessment practices.

Participation

The event is open up to 20 participants from the following Member States participating in the INT/2/024 project which need assistance to enhance the number and knowledge of staff involved in launching or expanding nuclear power programmes, namely:

Algeria, Argentina, Armenia, Brazil, Bulgaria, Czech Republic, El Salvador, Estonia; Ethiopia; Ghana, Hungary, Indonesia, Iran, (Islamic Republic of), Iraq, Jamaica; Jordan, Kazakhstan, Kenya, Lithuania, Mexico, Mongolia, Morocco, Myanmar, Nigeria, Niger, Pakistan, Philippines, Romania, Rwanda; Senegal, Singapore, Slovakia, Slovenia, South Africa; Sri Lanka; Thailand, Tunisia, Uganda, Zambia

Participants' Qualification and Experience

This training course is open to junior professionals from Member States that are actively preparing nuclear power infrastructure or have made a decision to embark on a new nuclear power programme. The training course is suitable for personnel from Nuclear Energy Programme Implementing Organizations (NEPIOs), Nuclear Regulatory Bodies, Owner/Operators, and education and training organizations who have direct responsibilities in one or more of the 19 nuclear infrastructure issues.

Participants should be knowledgeable about their country's national strategy and specific plans for nuclear power programme status, development and planning and have initial understanding of the reactor technology assessment as decision making methodology and willing to share their experience and lessons learned in assessing the national nuclear power programmes of relevance to this course scope and expected outcomes.

Candidates are requested to provide a summary of how this training will provide direct benefit to their current or future job position.

Individuals who participated in this course or a similar course in the past three years should not apply.

Accepted participants should visit the IAEA eLearning module on Nuclear Reactor Technology Assessment for Near Term Deployment, and become familiar with the content of the IAEA Nuclear Reactor Technology Assessment for Near Term Deployment based on the Nuclear Energy Series, No. NR-T-1.10 (Rev. 1), 2022. In addition, accepted participants should check the access to IAEA Reactor Technology Assessment IT Toolkit that requires a NUCLEUS account.

Participants are required to bring their own laptops, as the online version of the RTA toolkit will be used during the course. Additionally, they need to create a NUCLEUS account prior to the start of the course.

Application Procedure

Candidates wishing to apply for this event should follow the steps below:

1. Access the InTouch+ home page (https://intouchplus.iaea.org) using the candidate's existing Nucleus username and password. If the candidate is not a registered Nucleus user, she/he must create a Nucleus account (https://websso.iaea.org/IM/UserRegistrationPage.aspx) before proceeding with the event application process below.
2. On the InTouch + platform, the candidate must:
    a. Finalize or update her/his personal details, provide sufficient information to establish the required qualifications regarding education, language skills and work experience ('Profile' tab) and upload relevant supporting documents;
    b. Search for the relevant technical cooperation event (**EVT2500469**) under the 'My Eligible Events' tab, answer the mandatory questions and lastly submit the application to the required authority.

NOTE: Completed applications need to be approved by the relevant national authority, i.e. the National Liaison Office, and submitted to the IAEA through the established official channels by the provided designation deadline. **All nominations must include a scan of the candidate's first page of passport with photo.**

For additional support on how to apply for an event, please refer to the InTouch+ Help page. Any issues or queries related to InTouch+ can be addressed to InTouchPlus.Contact-Point@iaea.org.

Should online application submission not be possible, candidates may download the nomination form for the training course from the IAEA website.

NOTE: A medical certificate signed by a registered medical practitioner dated not more than four months prior to starting date of the event must be submitted by candidates when applying for a) events with a duration exceeding one month, and/or b) all candidates over the age of 65 regardless of the event duration.

Training on Basic Security in the Field (BSITF)

In order to comply with UN system-wide security measures, it is required that all training course participants complete the online security awareness training BSAFE (which replaces BSITF and ASITF), prior to traveling to locations where UN security phases are in effect. The aim of these course is to educate participants on how best to avoid or minimize potential dangers and threats, and to demonstrate what individuals can do if they find themselves in insecure situations. The course is available online (https://training.dss.un.org/course/category/6).

Once an individual has completed the training, he/she must go back to the main training page to receive the certificate. If the button to get the certificate is not immediately visible, please refresh the page. BSAFE is maintained by UNDSS; in case of problems with the system, please contact UNDSS through the "Contact Us" page on the training website (https://dss.un.org/dssweb/contactus.aspx).

This certificate is compulsory for any IAEA-supported activity and should be submitted, along with the Nomination Form, through the competent authority in your country (NLO). Copies of the certificate should be kept by the candidate for his/her records as the BSAFE certificate does not expire.

Administrative and Financial Arrangements

Nominating authorities will be informed in due course of the names of the candidates who have been selected and will at that time be informed of the procedure to be followed with regard to administrative and financial matters.

Selected participants will receive an allowance from the IAEA sufficient to cover their costs of lodging, daily subsistence and miscellaneous expenses. They will also receive either a round-trip air ticket based on the most direct and economical route between the airport nearest their residence and the airport nearest the duty station through the IAEA's travel agency American Express, or a travel grant, or they will be reimbursed travel by car/bus/train in accordance with IAEA rules for non-staff travel.

Disclaimer of Liability

The organizers of the event do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in approving his/her participation, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks.

Note for female participants

Any woman engaged by the IAEA for work or training should notify the IAEA on becoming aware that she is pregnant.

The Board of Governors of the IAEA approved new International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources. The Standards deal specifically with the occupational exposure conditions of female workers by requiring, inter alia, that a female worker should, on becoming aware that she is pregnant, notify her employer in order that her working conditions may be modified, if necessary. This notification shall not be considered a reason to exclude her from work; however, her working conditions, with respect to occupational exposure shall be adapted with a view to ensuring that her embryo or foetus be afforded the same broad level of protection as required for members of the public.

IAEA Contacts

Programme Management Officer

Mr Jing Zhang
Division for Europe
Department of Technical Cooperation
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA
Tel.: +43 1 2600 26540
Fax: +43 1 26007
Email: J.Zhang@iaea.org

Administrative Contacts

Ms Lena Krikorian
Division for Europe
Department of Technical Cooperation
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA
Tel.: +43 1 2600 22422
Fax: +43 1 26007
Email: L.Krikorian@iaea.org

Mr Qiankun Zhu
Division for Europe
Department of Technical Cooperation
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA
Tel.: +43 1 2600 24616
Fax: +43 1 26007
Email: Q.Zhu@iaea.org