



International Workshop on Addressing Infrastructure Issues and Small Modular Reactors & Microreactors Deployment

Hosted by

The Government of the Russian Federation

through the

State Atomic Energy Corporation ‘Rosatom’

St. Petersburg, Russian Federation

17 to 21 June 2024

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Information Sheet

Purpose

The purpose of the event is to discuss and share experiences on of the IAEA's Milestones Approach and the 19 nuclear infrastructure issues that countries should consider when developing a nuclear power programme, with a focus on the specific considerations for SMRs and MRs and their deployment.

It will provide a platform for senior officials and managers from government ministries, nuclear energy programme implementing organizations, regulatory bodies, and nuclear power plant owners/operators to meet and discuss their challenges and opportunities in developing their infrastructure for the deployment of SMRs and MRs.

Working Language

The training course will be conducted in English.

Deadline for Nominations

Nominations received after 03 May 2024 will not be considered.

Project Background

Small Modular Reactors (SMRs) are advanced nuclear reactors designed to generate electric power typically up to 300 MWe, whose structures, systems and components can be fabricated in factories and transported to installation sites based on demand. Modularization enables the economics of serial production, shorter construction schedules, and lower capital cost. The purpose of the project is to provide broad support to Member States in the deployment of SMRs and MRs. The INT2023 TC project (**Supporting Member States' Capacity Building on Small Modular Reactors and Micro-reactors and their Technology and Applications as a Contribution of Nuclear Power to the Mitigation of Climate Change**) provides a forum to enable effective capacity building through training and technology transfer activities on all aspects of SMR and MR development, including siting, design; technology; engineering, construction, commissioning, operation, maintenance, human resource management; fuel cycle; waste management; decommissioning; economics, financing; nuclear safety and security; emergency preparedness and response arrangements; and legal framework. The aim of the project is to enable national stakeholders to understand key characteristics of SMR and MR technologies and their applications, and to formulate, in line with international safety standards, countries' specific legal and regulatory frameworks, and generic user requirements and criteria. Member States are receiving technical assistance to evaluate the contribution of SMRs, MRs and their potential non-electric applications in addressing UN Sustainable Development Goals (SDGs) 6, 7, 9, 12 and 13, mitigating climate changes and integrating the basic principles of circular economy.

Member States must consider a wide range of infrastructure issues to introduce nuclear power in a country. The IAEA published the Milestones in the Development of a National Infrastructure for Nuclear Power, which introduces three phases of development laid out in a sequential process to develop a nuclear power programme. The publication provides a detailed description of the full range of infrastructure issues to be addressed and the expected level of achievement for each issue by the end of each phase. The Milestones in the Development of a National Infrastructure for Nuclear Power, or the 'Milestones Approach', has been well received and is widely used. Its framework and terminology have been broadly adopted.

First published in 2007, the Agency issued the first revision of the Milestones Approach in 2015 to include lessons learned from the 2011 Fukushima Daiichi accident, the IAEA Action Plan on Nuclear Safety implementation, and lessons learned from 17 Integrated Nuclear Infrastructure Review (INIR) missions conducted until the revision is prepared.

With recent interest among embarking and expanding countries on SMRs and MRs, the IAEA worked on supporting the application of the Milestones Approach to SMRs. A Technical Meeting held in 2020 concluded that the 19 issues of the Milestones Approach also apply to programmes based on SMRs; however, some aspects of infrastructure could be implemented or considered differently. Those discussions have been introduced as Annex - "Specific Infrastructure Considerations for SMRs" in the second revision of the Milestones publication, which has been published as pre-print on the IAEA website and is waiting for final editing and printing.

Scope and Nature

During this (5-day) workshop, participants will receive lectures from experts and participate in interactive discussions. The workshop will focus on developing infrastructure issues, as outlined in the revised IAEA publication Milestones in the Development of a National Infrastructure for a Nuclear Power Programme focused on Small Modular Reactors (SMRs) and Microreactors (MRs) and will include considerations on key aspects for deploying these novel technologies. The workshop will address the global nuclear power outlook and SMR trends, including nuclear safety, security, and safeguards (3S) considerations. Speakers with direct experience implementing infrastructure development activities for national nuclear power programme will highlight how, why and when those key aspects need to be considered when deploying SMRs and Microreactors. Individual experiences of some aspects of infrastructure development in the Member States may be presented during panel discussion sessions, allowing for engaging discussions.

Expected outputs

The expected output of the event is to strengthen knowledge and understanding in the following areas:

- The IAEA Milestones approach, its 19 nuclear infrastructure issues and the specific considerations with regards to SMRs;
- IAEA services in support of the development of nuclear infrastructure for SMRs;
- Participants will exchange experiences with regards to addressing infrastructure issues for SMRs and MRs, such as national position, legal and regulatory frameworks, financing for SMRs, etc.; and
- Participants will gain a better understanding of the evolving vendor deployment models and their potential impacts on legal and regulatory frameworks.

Participation

The event is open to up to 20 participants from the following Member States participating in the TC Project INT/2/023:

Algeria, Argentina, Armenia, Belarus, Bolivia, Brazil, Bulgaria, China, Croatia, Czech Republic, Egypt, El Salvador, Estonia, Ethiopia, Georgia, Ghana, Greece, Guatemala, Hungary, Indonesia, Islamic Republic of Iran, Jamaica, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Latvia, Libya, Lithuania, Madagascar, Malaysia, Mexico, Morocco, Nigeria, Pakistan, Peru, Philippines, Poland, Qatar, Romania, Rwanda, Saudi Arabia, Singapore, Slovakia, Slovenia, South Africa, Sri Lanka, Sudan, Thailand, Tunisia, Türkiye, United Republic of Tanzania, Uzbekistan, Zambia. **The selected participants to attend will be funded through INT2023.**

Australia, Canada, Czech Republic, France, Italy, Japan, Belgium, Denmark, Spain, China, Finland, India, Republic of Korea, South Africa, Russian Federation, United Kingdom, United States of America. **The participants to attend will be cost free to IAEA.**

The selected participants can attend this course virtually in a case if is unable to attend in face to face due to travel restriction and or other reason.

Participants' Qualification and Experience

This workshop's target audience is those working in Member States' government ministries and agencies, regulatory bodies, and nuclear energy programme implementing organizations (NEPIOs) considering, developing, and expanding a nuclear power programme for SMRs and Microreactors.

The activities will be conducted in English and candidates should have sufficient English proficiency to participate in the event without difficulty.

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 (EVT2400885) 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.

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