IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Pilot School for Regulating Small Modular Reactors

Hosted by the
Government of the Republic of Poland

through the
National Atomic Energy Agency (PAA)

Warsaw, Poland
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Information Sheet

Introduction

In response to the increasing interest in Small Modular Reactors (SMRs), particularly from embarking Member States (MS), this Pilot School for Regulating SMRs aims to assist Member States with the development of the regulatory framework for embarking and expanding countries interested in SMR deployment.

SMRs offer a viable alternative to larger nuclear power reactors due to their smaller size and potential inherent safety characteristics. In terms of needed political and financial commitments, SMRs are envisioned to be built in larger numbers, more quickly and in remote locations throughout the world. For these reasons, SMRs might represent a more attractive option to both embarking countries and countries expanding their existing nuclear power programmes. These States have varying capabilities — ranging from no nuclear experience to experience with laboratory scale nuclear facilities and industrial applications, the operation of research reactors or the handling of radioactive material in large amounts. In this context, however, States may struggle with the licensing of SMRs due to uncertainties regarding the

application of safety requirements, which at present focus mainly on the reactor designs that are currently commercially deployed.

National safety requirements need to take into account the specific features of SMRs and the application of a graded approach to existing safety requirements. According to IAEA Safety Standards, from the earliest phase of the development of safety infrastructure, the prime responsibility for safety rests with the prospective facility operating organization. The government, on the other hand, is required to establish an effective governmental, legal and regulatory framework to support a high level of safety.

The Pilot School has been developed in partnership with the Small Modular Reactor Regulators' Forum (SMR RF). The SMR RF is a regulator-to-regulators group. Its Terms of Reference state that the purpose of the Forum is to identify, enhance understanding of and address key regulatory challenges that may emerge in SMR regulatory discussions. This will help enhancing safety and efficiency in SMR regulation, including licensing, and enable regulators to inform changes, if necessary, to their requirements and regulatory practices. The IAEA is functioning as Secretariat to promote and facilitate the Forum's activities. In 2019, the SMR RF Steering Committee decided to disseminate the identified regulatory challenges related to SMRs to embarking countries through educational workshops. Based on the feedback received from embarking countries during these workshops, it was considered beneficial to complement these activities with detailed examples and in-depth case studies on how established regulators had adapted their regulations to SMRs and reviewed SMR designs. To address this need, the Agency has established this School for Regulating SMRs.

Through a combination of two interconnected workshops, comprising hands-on exercises and interactive sessions, the School of Regulating SMRs aims to enhance MS knowledge on regulating SMRs in alignment with experienced regulatory bodies and thereby contribute to safe deployment.

As design and deployment activities related to SMRs around the world are progressing, the School for Regulating SMRs will provide insights into the practices of regulatory bodies that have been assessing SMRs for the last several years, as well as the discussions held during the SMR Regulators' Forum meetings over the last three phases of its work (2014-2023). Regulatory bodies' experts participating in the School will benefit from the exposure to the tools and detailed examples from experienced regulatory bodies dealing with SMRs, along with hands-on exercises. Furthermore, participants will be presented with common positions developed by the SMR RF , thus clarifying regulatory views regarding SMR–related regulatory practices that may need to be re-evaluated. These materials will be supplemented by presentations on the current SMR technologies and country-specific presentations by invited SMR RF experts and will provide an ample opportunity for exchanging information and experiences between the lecturers and the participants, as well as among the participants themselves.

Objectives

The purpose of the event is to provide Member States' regulatory bodies with necessary knowledge and tools for safe SMR deployment, including the common positions developed by the SMR Regulators' Forum and detailed examples and in-depth case studies on changes to regulatory requirements and practices and on conducted regulatory reviews.

Target Audience

The School for Regulating SMRs is intended for regulatory bodies of Member States who are embarking on a nuclear power programme or expanding their nuclear power programme and considering the deployment of SMRs in the medium term.

Working Language(s)

English.

Structure

The Pilot School of Regulating SMRs will include two interconnected modules. The completion of the first module will be a prerequisite for participating in the second module.

The first week's module 'Case studies on SMR Regulatory Reviews' will exclusively focus on presenting experience from MS on SMR regulation. This will be achieved through lectures from MS' experts presenting case studies of application and adaptation of national regulatory frameworks to SMRs and case studies of SMR regulatory reviews. The case studies will cover key regulatory expectations and assessment of areas of design safety, safety analysis, and consideration of management of waste for SMRs. The module will also include exercises that would allow participants to review the safety of some key technical areas of a fictitious SMR design.

The second week's module 'Advanced Licensing Challenges' will aim to improve participants' practical knowledge on advanced licensing challenges for SMRs based on the SMR Regulators' Forum's work and common positions. This module will be informed by the materials used during the SMR RF educational workshops.

Topics

The following topics will be covered during the School:

- The IAEA's initiatives on SMRs
- Regulatory Forums on SMRs
- Overview of SMR technologies;
- Applicability of the IAEA Safety Standards to SMRs;
- Case studies on application and adaptation of national regulatory frameworks to SMRs with focus on design review:
    - ✓ Regulatory expectations used in reviews, what is behind the expectations and how they apply or not to SMRs;

- ✓ Examples of countries that have planned /are planning to change their regulatory frameworks to better adapt to SMR issues.

- Case studies of SMR design reviews (review criteria and outcomes):
  - ✓ How the review framework and the scope of the review was identified.
  - ✓ Development of review plans.
  - ✓ Overview of review outcomes and reasoning behind.
  - ✓ Comprehensive coverage of key technical topics with practical exercises for participants.
- Case studies focusing on on-site specific issues:
  - ✓ Specific issues related to detailed design and site;
  - ✓ How site-specific issues can be considered after design reviews (generic site).
- Design and safety analysis for SMRs.
- Licensing process challenges related to SMRs.
- Manufacturing, construction, commissioning, and operation issues.

A half day visit to an institution or nuclear facility in Poland will be included.

Participation and Registration

The event is open to 45 participants.

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 June 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 June 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.

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 June 2025**.

Venue

The event will be held in Warsaw, Poland.

Visas

Participants who require a visa to enter Poland should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of Poland.

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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.