



IAEA

International Atomic Energy Agency
Atoms for Peace and Development

Technical Meeting on Approach and Preparation for Operation of Small Modular Reactors

Hybrid Event

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

22 – 25 August 2023

Ref. No.: EVT2205449

Information Sheet

Introduction

At present, there are more than 80 Small Modular Reactors (SMR) designs from major lines of technology under different stages of development and deployment. The Akademik Lomonosov floating nuclear power plant has started commercial operation since May 2020 in Russian Federation, generating 70 MWe from two-unit PWR-type SMRs. The High Temperature Gas Cooled Reactor-Pebble-bed Module (HTR-PM) was connected to the electricity grid in December 2021 in China to generate 200 MWe. CAREM25 is in advanced stage of construction in Argentina with target connection to the grid in 2026. The ACP100 started construction in China during 2021. The RITM-200N has also started construction in Russian Federation. The System-Integrated Modular Advanced Reactor (SMART) in the Republic of Korea is undertaking a Standard Design Change Approval (SDCA) review. The VOYGR™ (NuScale Power Module) has received Design Certification in the United States – preparing for construction. Other designs, including BWRX-300 from the United States, NUWARD™ from France, Rolls-Royce SMR from the United Kingdom, and i-SMR from Republic of Korea are among those aimed for near-term deployments. SMRs are also designed to form a synergy between nuclear and distributed energy resources, particularly renewables, and subsequently tighten the coupling of these complementary technologies through various non-electric applications.

Over the past several years, the IAEA and other international organizations provided diverse publications with regard to SMRs. However, operational readiness for SMRs is not yet reflected comprehensively within existing resources. Member States (MSs) interested in SMRs need up-to-date information and technical know-how on the operational readiness and operational safety of SMRs prior to commercial operation.

Collection and dissemination of existing operational design approaches and practical procedures on current and near-term deployable SMRs will assist organizations in MSs considering one or more SMR designs. Specifically, the information to be gathered in this endeavour will help relevant stakeholders understand and prepare for capacity building needs necessary to support facility commissioning and operation.

Objectives

The purpose of the event is to serve as a forum for the exchange of technical knowledge and to identify issues related to the approach and preparation for operation of small modular reactors.

Scope

The scope of the meeting covers the consideration of operational readiness in near-term deployable SMR design development, commissioning, and lessons-learned from the demonstration operation. Specifically, the following topical areas are expected to be included in the discussions:

- Commissioning, approach to criticality, connection to the grid and power ascension;
- Operation, including operational limits and conditions;
- Base load operation and manoeuvrability in load following operation;
- Assuring fuel integrity and components' reliability in various modes of operation;
- Optimizing the arrangement of the Main Control Room (MCR) for multi-module Units;
- Understanding human-machine interface, managing operating personnel and their individual roles and responsibilities.

Target Audience

The event is intended for representatives of Member States that are interested in deployment of SMR or are in design, construction, and commission phases of SMRs, as well as for representatives of suppliers and individuals from international organizations, owner/operator organizations, technical support organizations, colleges/universities, and institutes involved in SMRs.

The participants are asked to present their experience regarding their experience, procedures, and knowledge and lessons learned. The proposed presentations, or a shorty synopsis of these, should be sent to the Scientific Secretary (see contact details below) for review, not later than **30 June 2023** with the participation form.

Working Language(s)

English.

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, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g., Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA **by 30 June 2023**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

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.

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 (please, also observe the planned hybrid format).

The application for financial support should be made using the **Grant Application Form (Form C)**, which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **30 June 2023**.

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.

The virtual component of the event will be held via IT platform WebEx.

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:

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Department of Nuclear Energy

International Atomic Energy Agency

Vienna International Centre

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries and correspondence on other matters related to the event to the Administrative Secretary.

Participation Form

Technical Meeting on Approach and Preparation for Operation of Small Modular Reactors

IAEA Headquarters Vienna, Austria and virtual participation via Cisco Webex or Microsoft Teams

26–28 June 2023

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [W.B.Kim@iaea.org], the Co-scientific Secretary [M.Subki@iaea.org], and to the Administrative Secretary [O.Gloeckler@iaea.org].

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 30 June 2023

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms
Institution:		
Full address:		
Tel. (Fax):		
Email:		
Nationality:	Representing following Member State/non-Member State/entity or invited organization:	
If/as applicable: Do you intend to submit a paper? Yes <input type="checkbox"/> No <input type="checkbox"/> Title: I plan to attend virtually: Yes <input type="checkbox"/> No <input type="checkbox"/>		

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.

Grant Application Form

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22–25 August 2023

To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary [W.B.Kim@iaea.org], the Co-scientific Secretary [M.Subki@iaea.org], and to the Administrative Secretary [O.Gloeckler@iaea.org].

Deadline for receipt by IAEA through official channels: 30 June 2023

Family name(s): (same as in passport)	First name(s): (same as in passport)	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	
I plan to attend virtually:	Yes <input type="checkbox"/> No <input type="checkbox"/>	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended from to	

2. Recent employment record (starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked from to	

3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of event:

Date: **Signature of applicant:** _____

Date: **Name, signature and stamp of Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority** _____