



Training Course on Safety Aspects of Small Modular Reactors and Other Innovative Reactor Technologies

Hosted by the

Government of Japan

through the

**Fukui Int'l Human Resources Development Center for Atomic Energy,
The Wakasa Wan Energy Research Center**

Fukui, Japan

4–8 November 2024

Ref. No.: EVT2402354

Information Sheet

Introduction

To meet the growing demand for energy and to mitigate global climate change challenges, the interest in advanced reactor technologies, including Small Modular Reactors (SMRs), for electric and non-electric applications is growing.

While advances in technologies continue to evolve worldwide, new opportunities and challenges emerge, necessitating enhanced cooperation and timely efforts to provide Member States with adequate guidance on the implementation of the Agency's safety standards and their applicability to different advanced reactor technologies.

Recognizing this need, the IAEA has developed this training course as part of a series of capacity-building activities dedicated to enhancing the competence levels of personnel in Member States concerning the requirements and recommendations of the Agency safety standards and their applicability to advanced reactor technologies.

This training course also aims to raise awareness of the key safety characteristics associated with different types of advanced reactor technologies.

Objectives

The purpose of the event is to train participants in key safety aspects of small modular reactors (SMRs) and other innovative reactor technology types, namely water cooled SMRs, high temperature gas cooled reactors, sodium cooled fast reactors, lead cooled fast reactors and molten salt reactors.

This event will enhance participants' understanding of the IAEA's programme on advanced reactor technologies, including SMRs; as well as increase their knowledge, and awareness of the key aspects related to the safety of the five different advanced reactor technology types. The event will also provide a forum for exchanging experiences with peers and experts and will advance participants' knowledge.

Target Audience

The nominees should be representatives from invited Member States' governments, regulatory bodies, technical scientific support organizations, or prospective owner/operator organizations and SMR developers, particularly those needing to understand key issues and challenges associated with safety consideration of advanced reactor technologies, including SMRs.

Nominees are requested to provide a summary of how this event will provide direct benefit to their current or future job position and/or organization.

The event will be conducted in English, and it is expected that candidates possess a sufficient level of English proficiency to actively engage in the event without encountering any language-related difficulties.

Note that accepted nominees will be encouraged to read a list of references to get the most out of the event. The list of references will be provided in due course.

Working Language(s)

English

Structure

During this 5-day event, the selected participants will receive lectures from the IAEA and international

experts, as well as participate in discussions and in-class group sessions.

The first day will provide an introduction of the IAEA's programme on advanced reactor technologies, including SMRs, and will be followed by five reactor technology specific modules during the rest of the week. The five modules will focus on WC-SMRs, HTGRs, LFRs, SFRs, and MSR and will be delivered by international experts in each technology.

To facilitate meaningful discussions on the key safety aspects of each technology, each technology specific module will be structured as follows:

- An introduction to the reactor technology, such as general plant description, operating history, nuclear core and fuel design, main plant systems and main applications;
- A description of the safety aspects of the reactor technology, such as design characteristics important to safety, implementation of defence-in-depth, how the fundamental safety functions (reactivity control, heat removal, confinement) are achieved, typical potential accidents and how they are dealt with in the design. For some of the technologies, a discussion about waste and spent fuel management and decommissioning will be included.

In-class group sessions will be organized throughout the week to help participants to have a better understanding of the matters discussed and assimilate the contents of the technology specific modules. Conclusions from the work will be discussed on the last day.

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 **31 July 2024**, 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 **31 July 2024**.

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 the 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 **31 July 2024**.

Visas

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

Additional Information

The IAEA will provide selected participants with a travel allowance for a round trip flight ticket to and from Fukui, Japan. The host organization, Fukui International Human Resources Development Centre for Atomic Energy, The Wakasa Wan Energy Research Centre, will provide the participants with accommodation, food and minor incidental expenses.

The copying and shipping of accumulated training course materials to the participants' home countries do not fall under the responsibility of the IAEA and the host organization.

IAEA Contacts

Scientific Secretary:

Ms Insuk Jang

Office of Safety and Security Coordination
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 25932

Fax: +43 1 26007

Email: I.Jang@iaea.org

Technical Officer:

Ms Ana Gomez Cobo

Division of Nuclear Installation Safety
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: + +43-1-2600-22830

Fax: +43 1 26007

Email: A.Gomez-Cobo@iaea.org

Administrative Secretary:

Ms Dilya Kochkarova

Office of Safety and Security Coordination
Department of Nuclear Safety and Security
International Atomic Energy Agency
Vienna International Centre
PO Box 100
1400 VIENNA
AUSTRIA

Tel.: +43 1 2600 26066

Fax: +43 1 26007

Email: D.Kochkarova@iaea.org

Host Organization Contacts:

Mr Takuya Kitabata

Director

Fukui International Human Resources Development Center for Atomic Energy
The Wakasa Wan Energy Research Center
AQUATOM 2F, 2-2-4 Kagura-cho, Tsuruga
FUKUI 914-0063
JAPAN

Fax: +81-770-47-6228

Email: tkitabata@werc.or.jp

Mr Hiroto Watanabe

Manager

Fukui International Human Resources Development Center for Atomic Energy
The Wakasa Wan Energy Research Center
AQUATOM 2F, 2-2-4 Kagura-cho, Tsuruga
FUKUI 914-0063
JAPAN

Tel.: +81-770-24-7272

Email: hwatanabe92@werc.or.jp

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.



This project is conducted by the IAEA, with funding by Japan and the Republic of Korea, among others.