IAEA
International Atomic Energy Agency
Atoms for Peace and Development

Regional Meeting on the prospects and impediments of Small Modular Reactor deployment within the framework of low carbon strategies and the Paris Agreement

Hosted by

The International Atomic Energy Agency
IAEA Headquarters
Vienna, Austria

19 to 21 February 2020

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Information Sheet

Purpose

The purpose of the event is to finalize the TC project RER/2/017 work plan of activities specifically related to SMRs, to understand the planned activities of Member States on SMR development and deployment, and to improve the understanding of how SMRs can contribute to the Paris Agreement.

Working Language(s)

The working language(s) of the event will be English.

Deadline for Nominations

Nominations received after **6 January 2020** will not be considered.

Project Background

Small Modular Reactors (SMRs) are newer generation reactors designed to generate electric power up to 300 MW whose components and systems can, in most cases, be shop fabricated and transported as modules to the sites for installation. Modularization and/or small size may enable economic mass production, short construction times and lower capital cost. Some Member States in Europe plan to implement long term strategic programmes by taking a leadership role in the development of SMR designs and technologies for near term deployable domestic use. SMRs may be an option for other countries in Europe that need alternatives to large reactors and fossil power plants.

An initial request from several European Member States (MS) that plan to initiate or to expand their nuclear energy programme have been addressed by the Regional Technical Cooperation Project RER/2/014 - Facilitating Capacity Building for Small Modular Reactors: Technology Developments, Safety Assessment, Licensing and Utilization. The main aim was to help increase their capabilities to make knowledgeable decisions, particularly to become capable to identify and perform assessments of SMRs available for near term deployment.

The IAEA has launched a new project RER/2/017 "Assessing the Role of Low Carbon Energy Technologies for Climate Change Mitigation". Under the Paris agreement Member States will develop Integrated National Energy and Climate Plans on a regular basis. A successful decarbonisation strategy for the power sector will need to rely on a mix of future technologies that may include nuclear power. Many of the participating Member States have smaller electric grids, is seeking solutions to decarbonise the electricity generation, district heating or other non-electric applications, or looking for electricity sources that can support variable and uncertain generation systems on the grid. Small Modular Reactors (SMRs) show potential to fulfil all these requirements and are considered as a possible part of the energy mix by several MSs.

Several aspects related to SMRs not adequately addresses in RER/2/014 were therefore included in the RER/2/017 project. As examples these include the load following capabilities of SMRs; cogeneration of SMRs and using SMRs just for production of heat; assessing the financial viability of nuclear power projects using the IAEA's models; the identification of different financing sources for nuclear power projects is highlighted.

Scope and Nature

The meeting will consist of presentations from IAEA and regional experts on the status of SMR technology development for near term deployment. Member States with the interest in SMR deployment will present their specific technical, deployment and infrastructure considerations. Case studies and lessons learned by some Member States will also be shared.
This 3-day meeting will provide in-depth discussion of the required capacity building and gap-analyses on the potential roles and impediments of deploying SMRs to support the execution of the Paris Agreement.

The RER/2/017 project activities related to SMRs will be discussed, confirmed and terms of references will be developed for each activity.

Expected Outputs

One of the two main outputs of TC project RER2017 is the exchange of knowledge and experience in all issues related to SMRs deployment including their potential contribution to climate change mitigation in order to support countries in defining their commitments under the Paris Agreement (NDCs).

Since the meeting will serve as a forum to discuss and coordinate the upcoming activities in support of this project output, the primary output of this meeting is a finalised project work plan of RER2017.

Furthermore, an expected outcome of this meeting is an enhanced understanding of the potential roles of SMR deployment in the framework of the Paris Agreement and the related international climate change discourse.

Participation

Each country is invited to nominate one candidate who should be a national project counterpart of the project RER2017.

Participants' Qualifications and Experience

The participants should be national project counterparts of RER2017. Specialists and experts from these Member States should be interested to increase their capacity or have a high commitment in developing Small Modular Reactor Deployment Programmes. Active participation in IAEA SMR activities will be a positive indicator.

<u>The project target MSs are:</u>

MSs interested in increasing their capacity in evaluating and assessing the role of energy technologies to climate change mitigation and/or those showing a high commitment in developing Small Modular Reactor Programmes in the future and that have in the past actively participated in IAEA SMR activities.

<u>The project target counterparts are:</u>

- Institutions involved in the various aspects of Small Modular Reactors development and deployment.
- Nuclear power professionals, who can coordinate the SMR related topics addressed by this project on a national level by ensuring that relevant national experts participate in the various project activities ranging from technology development and innovation, safety and regulatory aspects to overcoming financing issues

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 (EVT1907817) 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.

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 meeting 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.

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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