



IAEA

International Atomic Energy Agency

IAEA Platform on **SMALL MODULAR REACTORS AND THEIR APPLICATIONS**





"To meet climate change goals and enhance energy security, our world is going to need a lot more clean and reliable energy. Small modular reactors (SMRs) can help us get there. SMRs will provide greater options for countries

to quench their growing thirst for energy, but without overheating the planet. To help accelerate the roll-out of safe and secure SMRs and meet Member States' needs, I created the IAEA Platform on SMRs. It provides countries with coordinated support and expertise on SMRs from across the entire Agency, including development, deployment and oversight. I encourage countries looking for climate and energy solutions to request the Agency's support through the IAEA Platform on SMRs."

Rafael Mariano Grossi
IAEA Director General

WHY?

Nuclear power is broadly recognized as a low-carbon energy source and indispensable option in achieving net zero economies by 2050 in accordance with the Paris Climate Agreement if deployed rapidly and on a large scale. There is a growing interest in Small Modular Reactors (SMRs) due to attractive attributes including lower upfront capital costs, economic competitiveness based upon modularization, reduced construction times and serial manufacturing, and flexibilities in siting, operation, and non-electric applications.

Over 40 Member States have expressed interest in SMR technologies and their applications. Many Member States and other stakeholders have requested the Agency's support related to all aspects of SMR development, deployment, and oversight.

To respond to this request, the IAEA Platform on SMRs and their Applications was established in April 2021 with the purpose of coordinating the Agency's activities on SMRs and their applications while providing a focal point for Member States and other stakeholders requesting assistance.

WHAT IS THE SMR PLATFORM?

With the participation of all relevant IAEA departments and offices, **the Platform on SMRs and their Applications coordinates IAEA efforts** to strengthen support to Member States and other stakeholders interested in the early deployment of SMRs. **This support covers not only technology development and demonstration, but legal frameworks, high standards of safety, security, and safeguards as well.**

The SMR Platform reviews all requests submitted to the IAEA by Member States and other stakeholders in the area of SMRs and related applications, identifying the best approaches and mechanisms to address them in a consistent and coordinated manner.

STRUCTURE

The SMR Platform Steering Committee

(SMR-SC) is the senior governing body chaired by the IAEA Deputy Director General and Head of the Department of Nuclear Energy. It comprises Directors from relevant departments and offices reporting to the Director General.

The SMR Platform Implementation Team

(SMR-PIT) comprises Heads of Sections from relevant IAEA departments and offices reporting to the Director General, and Task Forces which are organized thematically to address specific requests from Member States and other stakeholders.

The Nuclear Harmonization and Standardization Initiative (NHSI)

is aimed at facilitating the effective global deployment of safe and secure advanced nuclear reactors. It is implemented under the guidance of the IAEA Director General and the supervision of the Deputy Directors General, Heads of the Department of Nuclear Energy and of the Department of Nuclear Safety and Security. It is comprised of two separate but complementary tracks:

- **NHSI Industry Track** chaired by the Director of the Division of Nuclear Power, is focused on four topics: harmonization of high-level user requirements, common approaches on codes and standards, experimental testing

and validation of design and safety analysis computer codes for SMRs and accelerating the implementation of nuclear infrastructure for SMRs.

- **NHSI Regulatory Track** chaired by the Director of the Division of Nuclear Installation Safety, is comprised of three working groups: building an information sharing framework, development of a multi-national pre-licensing regulatory design review, and development of approaches to leverage other regulator's reviews and supporting regulators undertaking collaborative reviews.

A NHSI Special Task Force, co-chaired by both Directors, has been established under the IAEA SMR Platform to ensure coordination with the Agency's activities in the area of SMRs.

The SMR Portal (<https://smr.iaea.org>) provides Member States and other stakeholders with a comprehensive and systematic overview of all the Agency's services and activities on SMRs and their Applications. The Portal serves as tool for sharing information with external stakeholders and as an entry point for Member States and other stakeholders to request assistance. Requests for assistance or additional information can be made by contacting SMR.Platform@iaea.org

ACHIEVEMENTS OF THE SMR PLATFORM THROUGH 2023

- Expert Mission conducted to review pre-feasibility study reports on desalination for Jordan.
- Ongoing delivery of support to address requests from several Member States and other stakeholders, including Brazil, India, Poland, Venezuela and the World Association of Nuclear Operators (WANO).
- Delivery of eight unique events by the end of 2023 including an Interregional Event on Technology Development and Applications of SMRs in Sanya, China from 04-08 September 2023.
- International Symposium on the Deployment of Floating Nuclear Power Plants in Vienna from 14-15 November 2023. The Symposium serves to enhance knowledge and understanding of the floating NPPs designs, relevant legal, safety and security aspects and licensing approaches.
- Side event for the 67th IAEA General Conference on the SMR Platform Activity: Reactor Technology Assessment using ARIS Database.
- Developed a Medium-Term Strategy through 2029 and an associated high-level action plan for Agency support to Member States in the area of SMRs and their applications.
- Annual Report released and published on the SMR Portal.

FUTURE EVENTS OF THE SMR PLATFORM

An International Conference on SMRs and their Applications is being organized for October 2024. The Conference is expected to address major topics related to the development, deployment, safety, economics, and market readiness of SMRs and their applications, including the need for harmonization and standardization of the regulatory and industrial framework, as well as potential barriers from the societal and financial viewpoint.

ASSISTANCE TO MEMBER STATES

Member States or other stakeholders can request assistance on general issues related to SMRs and their applications through official channels, addressing their request to the Chair of Steering Committee of the SMR Platform, IAEA Deputy Director General and Head of the Department of Nuclear Energy. Once received, the request will be considered by the SMR Platform and directed to the appropriate personnel.

The IAEA's SMR Platform is ready to take on and implement any new activities requested by Member States or identified by its leaders as important for advancing the technology.

Questions on this process may be directed to
SMR.Platform@iaea.org

smr.iaea.org



IAEA

International Atomic Energy Agency

International Atomic Energy Agency
Vienna International Centre
PO Box 100, 1400 Vienna, Austria
Tel.: +43 1 2600-0
www.iaea.org