

IAEA Launches Expert Advisory Service for Research Reactor Infrastructure, First Mission to Nigeria

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(https://www.iaea.org/sites/default/files/styles/hd_1920x1080/public/nigeria090218.jpg?itok=S7tYajL9)

Members of the INIR-RR mission team in Abuja on 8 February 2018 along with officials from the Federal Ministry for Science and Technology of Nigeria (Photo: IAEA)

The International Atomic Energy Agency (IAEA) has launched a new peer review service to assist Member States in the development of infrastructure for nuclear research reactors, expanding the range of its expert advisory missions. The first Integrated Nuclear Infrastructure

Review for Research Reactors (INIR-RR) was conducted this week in Nigeria at the invitation of the Government, which is planning to build the country's second research reactor.

Research reactors are used for research, development, education and training. They play a vital role across several fields, producing radioisotopes used in research, medicine, industry and agriculture. Operation of a research reactor requires a national infrastructure — including a legal and regulatory framework — to ensure that national and international obligations are met during planning, design, construction, operation and decommissioning.

The INIR-RR follows the IAEA's Milestones Approach (<http://www-pub.iaea.org/books/iaeabooks/8843/Specific-Considerations-and-Milestones-for-a-Research-Reactor-Project>), which provides guidance on the preparation of a research-reactor project by addressing 19 issues ranging from nuclear safety and security to the fuel cycle, waste management, and funding and financing. The INIR-RR helps Member States identify and address gaps in infrastructure development, in line with international good practices as well as applicable IAEA safety standards and guidance.

“While the IAEA previously carried out advisory missions to support Member States in embarking on research-reactor programmes, the INIR-RR will offer more structured and systematic assistance for assessing and further developing national infrastructure,” said Andrea Borio di Tigliole, team leader for the mission to Nigeria and Head of the Research Reactor Section in the IAEA's Department of Nuclear Energy. “Research reactors can foster development and play an important role in enhancing quality of life.”

The INIR-RR broadens the menu of IAEA peer reviews

(<https://www.iaea.org/services/review-missions>), which include the INIR for Member States considering the introduction or expansion of a nuclear-power programme. The mission to Nigeria was conducted by the IAEA Departments of Nuclear Energy, Nuclear Safety and Security, and Nuclear Science and Applications, and implemented as part of the IAEA's Technical Cooperation Programme. The INIR-RR mission team comprised two experts from Argentina and the Republic of Korea as well as four IAEA staff members.

The team said Nigeria is making notable progress in strengthening the infrastructure for a new research reactor, which is expected to begin operation in 2025. The team also made recommendations and suggestions aimed at helping Nigeria to advance infrastructure development, including to finalize the cost assessment and funding strategy and to complete the plan for human-resources development. The team also acknowledged Nigeria's good practice of effectively utilizing resources across national organizations involved in the project.

"We believe this review will serve Nigeria well as it moves forward with its plans for a new research reactor, which will provide important resources for health-care, industry, agriculture and human capacity building in the decades to come," said Simon Mallam, chairman of the Nigerian Atomic Energy Commission (NAEC).

Nigeria began operating its first research reactor in 2004, the Chinese-supplied Miniature Neutron Source Reactor (MNSR), for the analysis of materials and training. The IAEA is assisting with the conversion of the MNSR to Low Enriched Uranium (LEU) fuel and the repatriation of its irradiated High Enriched Uranium (HEU) core to China.

The new, more powerful research reactor will use LEU and be utilized for producing radioisotopes for cancer diagnosis and treatment, industrial applications, and developing skills and competencies as the country pushes forward with plans to introduce nuclear power by 2025.

10

7

Related Resources

- [Research Reactors \(https://www.iaea.org/topics/research-reactors\)](https://www.iaea.org/topics/research-reactors)
- [Energy \(https://www.iaea.org/topics/energy\)](https://www.iaea.org/topics/energy)
- [Nuclear Infrastructure \(https://www.iaea.org/topics/nuclear-infrastructure\)](https://www.iaea.org/topics/nuclear-infrastructure)
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