



NIAR

ROSATOM STATE CORPORATION ENTERPRISE

CHALLENGES & APPROACHES FOR FUTURE R&D AND DEVELOPMENT ON NUCLEAR TECHNOLOGIES



RIAR's Experimental Capabilities

RIAR is the Russia's and world's largest research center that renders knowledge-intensive high-tech services on a wide range of experimental irradiation tests and post-irradiation examinations.



- The **world's largest fleet of the nuclear research installations**: five reactors and two critical assemblies
- The **world's largest materials testing complex** for PIEs where full-size FAs can be examined
- **Radiochemical complex** for NFC activities
- Facilities to investigate the properties of transuranium elements and produce them, produce high specific activity radionuclides, radioactive sources, and conduct R&D
- Full-cycle infrastructure including fuel fabrication, SNF and RW management, MA handling

Challenges:

- The closure of the Halden reactor **has created a vacuum in the nuclear fuel and material research world**. In order to maintain a minimum level of continuity, at least to address the most important issues, initiatives need to be taken at the international level to favor the use of selected research reactors for joint programs.
- The development of international cooperation in conducting large-scale research requires **new modern approaches to legislative and legal support** (taking into account the non-proliferation and export control requirements).
- The prospects and potential for nuclear energy development in new-comer countries lay the grounds for the leading countries that construct nuclear facilities (NPPs, nuclear science and technology centers, etc.) to expand the scientific and educational opportunities **in creating modern theoretical and practical mechanisms for training future specialists**.

Approaches:

- Promotion of the JSC “SSC RIAR” experimental site as a **new International Research Center** (under the auspices of OECD NEA, for example).
- Under the strong support of the OECD NEA and ROSATOM, the development and launch of **pilot International Research Projects** at JSC “SSC RIAR” site **as early as 2019**.
- Joint work of experts and government officials of all stakeholders **on the harmonization of national and international standards, norms and rules** (transportation, research, return of research objects, etc.).
- Under the support of the NRNU MEPhI and ROSATOM, the JSC “SSC RIAR” site - a **basic center for theoretical and practical training of nuclear industry specialists**. Strengthening the laboratory and experimental infrastructure for training and professional development (stands, simulators, models, etc.).



NIIAR

ROSATOM STATE CORPORATION ENTERPRISE

Thank you for attention!

For further information please contact:

Alexander TUZOV

JSC "SSC RIAR"

Phone: +7 (84235) 9-83-83

Web: www.niiar.ru

E-mail: adm@niiar.ru.