

Selected achievements

2022: Both units of Ignalina nuclear power plant (NPP) are defueled and all fissile material is removed as part of the decommissioning process. Spent nuclear fuel is transferred to the Interim Spent Fuel Storage Facility at Ignalina NPP.

2015: The quality management system of the Lithuanian State Nuclear Power Safety Inspectorate (VATESI) is awarded ISO 9001 certification.

2013: Lithuania's Radiation Protection Centre establishes a new Biological Dosimetry Laboratory to carry out cytogenetic analysis of exposure to ionizing radiation and biological dose assessment for the diagnosis of diseases.

National priorities

- Management and disposal of nuclear waste
- Human health
- Emergency and preparedness
- Governmental and regulatory frameworks for safety, security and legal framework

Main areas of IAEA support

- Institutional capabilities for nuclear waste disposal
- Regulatory oversight of nuclear facilities
- Human health

Project successes

Regulatory infrastructure

In 2020, an IAEA Integrated Regulatory Review Service (IRRS) follow-up mission took place in Lithuania to evaluate progress made since the previous IRRS Mission in 2016.

Experts involved in the IRRS follow-up mission concluded that Lithuania had made significant progress in improving its regulatory infrastructure for nuclear and radiation safety.



Shipment of spent nuclear fuel package to storage, Lithuania. (Photo: R. Šumskis/Ministry of Energy of Lithuania)

Findings demonstrated the maturity and flexibility of the Lithuanian nuclear and radiation safety regulation and supervision system.

Decommissioning and management of radioactive waste

Since 2009, the IAEA has collaborated with Lithuania to develop a decommissioning plan for Units 1 and 2 of the Ignalina NPP. This resulted in the establishment of regulatory frameworks for safe radioactive waste management, including for the operation of a landfill repository for low-level waste (now operational), a near-surface repository for low and intermediate level short-lived waste (under construction), and a deep geological repository (at the siting stage).

Through activities such as an ARTEMIS mission carried out in 2022, the IAEA facilitated peer reviews, provided training, and provided specialized equipment. This contributed to the successful defueling and removal of fissile material from both Ignalina NPP units in 2022.

Staff at the plant now share the knowledge acquired during this process through scientific visits dedicated to decommissioning, decontamination, environmental monitoring and waste management.

Radiation protection

Lithuania has put in place standardized quality assurance and control protocols in hospitals, leading to substantial advancements in the protection of patients undergoing radiotherapy and nuclear medicine procedures.

The IAEA played a crucial role in elevating clinical expertise by providing training for medical staff at the Radiation Protection Centre and medical physicists and radiotechnologists across four radiotherapy and four nuclear medicine departments nationwide.

The IAEA supported human resource development included quality assurance programmes, implementing effective quality control measures, and minimising exposure to ionizing radiation for both patients and healthcare professionals.



Buffer storage of very low-level radioactive waste packages, Lithuania. (Photo: R. Šumskis/Ministry of Energy of Lithuania)

Participation in the major initiatives

- ZODIAC

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

