Lithuania

Nuclear regulatory authority

The State of Nuclear Power Safety Inspectorate (VATESI) regulates nuclear and radiation safety at nuclear power and waste management facilities; safety and security of nuclear installations and nuclear materials; transportation safety of nuclear materials; and non-proliferation issues concerning nuclear weapons.

Nuclear activities

Lithuania has one nuclear power plant, Ignalina Nuclear Power Plant with two RMBK-1500 units which are both closed. Unit-1 was finally shutdown in 2004 and Unit-2 in 2009. Unit-1 reactor is defueled and Unit-2 reactor still has about 2/3 of its fuel inside. About 3/4 of the whole Ignalina spent fuel inventory are kept at the units spent fuel pools. Decontamination and dismantling activities of no more needed equipment are in progress

Site evaluation report for the new Visaginas Nuclear Power Plant was agreed on by VATESI on 30 October 2014. Government of Lithuania has to decide on the further fate of the new built project.

The Mai?iagala Radon-type waste storage facility was closed in 1989. This storage was designed for institutional waste disposal with the volume about 200m3. The post-closure surveillance licence was issued in 2006.

In the vicinity of Ignalina NPP there is an interim spent nuclear fuel storage facility and a cemented radioactive waste storage facility. The following nuclear facilities are under implementation in 2014-2019: a new spent nuclear fuel storage facility; facilities for treatment and storage of solid radioactive waste; a very-low-level radioactive waste repository; and a low and intermediate radioactive waste repository.

Radioactive waste and spent fuel management

In accordance with the Radioactive Waste Management Strategy approved by the Government in 2008, Ignalina NPP is responsible for the implementation of a new classification system of radioactive waste, and has to install equipment for conditioning of radioactive waste, storage facilities of radioactive waste as well as the repositories of short-lived radioactive waste.

- **Operating dry type spent nuclear fuel storage facility** contains 98 CONSTOR RBMK-1500 type, 20 of CASTOR RBMK containers. The facility is fully loaded.
- **Operating storage facility for cemented liquid waste.** On 10 March 2006 VATESI issued a license to Ignalina Nuclear Power Plant for operation of storage facility for storage of cemented spent ion-exchange resins, filter aid (perlite) and part of evaporator concentrate with solid particle sediments.
- **New spent nuclear fuel storage facility (project B1)** On 2 September 2009, VATESI issued a license to Ignalina NPP for the construction of a new spent nuclear fuel storage facility. The start-up of operation of the new spent nuclear fuel storage facility is scheduled for 2017; the spent nuclear fuel will be stored for a 50-year period. The storage facility will be constructed in Visaginas municipality, Lithuania. It is planned to load 91 spent nuclear fuel assemblies into one container and to store 201 containers at the storage facility, thus taking all the remaining spent fuel from Ignalina NPP units.
- **Solid radioactive waste retrieval facilities (project B2)** these facilities are dedicated for retrieval and initial characterisation of the Ignalina NPP operational waste from the old storage facilities (buildings 155, 155/1, 157/1). For retrieval facilities from 155 and 155/1 buildings the construction licence was issued in 2011. For retrieval facilities from 157 and 157/1 buildings the technical design was agreed on in 2014. About 27 000 m3 of waste will be retrieved from mentioned buildings and most will be sent to new solid radioactive waste management and storage facilities (project B3/4).
- **Solid radioactive waste management and storage facilities (project B3/4)** On 27 August 2009, VATESI issued a licence to Ignalina NPP for the construction of new solid radioactive waste management and storage facilities. About 128 000 m3 of solid radioactive operational and decommissioning waste will be managed in new solid radioactive waste management facilities. The planned capacity of the storage facility for short-lived radioactive waste is about 2500 m3 and for long-lived radioactive waste is about 2000 m3. These storage facilities could be extended if necessary.
- **Very low level radioactive waste storage facility (project B19-1)** On 18 March 2010 VATESI issued a license to Ignalina NPP, whereby Ignalina NPP is permitted to construct a very low level radioactive waste storage facility. This facility started the commercial operation in 2013. The load capacity of this buffer storage is 4000 m3. When the storage facility is filled in, radioactive waste will be transferred into very low level radioactive waste repository approximately every 2 years.
- **Very low level radioactive waste disposal facility (project B19-2)** On 23 December 2015 VATESI issued a license to Ignalina Nuclear Power Pant, whereby Ignalia Nuclear Power Plant is permitted to construct and operate a very low level radioactive waste disposal facility. Capacity of very low level radioactive waste disposal will be 60 000 m3. Planned start of operation is in 2018.
- **Low and intermediate radioactive waste disposal facility (project B25)** - technical design is prepared and reviewed by responsible institutions. Capacity of low and intermediate level radioactive waste disposal facility will be 100 000 m3. Planned start of operation is in 2021.

Main legal instruments

The key legal documents associated with the use of nuclear energy for peaceful purposes are the Law on Nuclear Energy, Law on Nuclear Safety, Law on Radioactive Waste Management, and the Law on Radiation Safety. Based on the mentioned Laws, the Government of the Republic of Lithuania and its institutions develop secondary legislation, with VATESI being responsible for establishing nuclear and radiation (at nuclear and waste management facilities) safety, nuclear materials accounting and control as well as physical security regulations.

For more details see VATESI website: www.vatesi.lt

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