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Initial stage of the Lithuanian Deep Geological Repository project

INITIAL STAGE OF THE LITHUANIAN DEEP GEOLOGICAL REPOSITORY PROJECT

"Development Program for Decommissioning of Nuclear Power Facilities and Radioactive Waste Management for 2021–2030"(hereinafter - the Program) was approved by the Resolution No. 76 of the Government of the Republic of Lithuania on 3 February 2021.
The Program establishes that the only sustainable final method of disposal of spent nuclear fuel and other long-lived radioactive waste, that can be considered at the moment, is their placement in a deep geological repository.

State Enterprise Ignalina Nuclear Power Plant (hereinafter - INPP) was appointed as the institution responsible for the implementation of the **Deep Geological Repository** (hereinafter - DGR) project in Lithuania.

Currently, following the recommendations of the IAEA "Experience in selection and characterization of sites for geological disposal of radioactive waste" (IAEA-TECDOC-991, Vienna, 1997), INPP is carrying out the initial stage of the conceptual planning project - site selection.

At this stage, studies and evaluations are carried out to select the DGR location. Based on the results of these activities, INPP will plan further implementation of the DGR.

At present, studies have been carried out to develop criteria for selecting a site for the DGR:
- "Determination of geological criteria for the suitability of the geological environment for the Deep Geological Repository of the radioactive waste", 2022;
- "Social and economic evaluation for selection of potential region for Deep Geological Repository", 2022;
- „Final report on detailed analysis of formations potentially suitable for the construction of the Deep Geological Repository of the radioactive waste and prioritisation of potential sites according to the main geological (suitability) selection criteria ", 2023;
- "Safety-related criteria for Deep Geological Repository construction in Lithuania"; 2023;
- "Comprehensive assessment of the results of the studies carried out in the Deep Geological Repository project", 2023.

Considering importance of their proper performance for the successful implementation of the entire project, Lithuania in October 2022 requested the **IAEA Artemis mission** to provide an independent international evaluation of the studies carried out by Lithuania regarding the development of DGR site selection criteria.

Based on the above-mentioned criteria and evaluations, the most promising potential DGR sites for further research will be identified.

The planning and implementation of the initial stage of the Lithuanian Deep Geological Repository project, the involvement of independent IAEA experts, experience gained and lessons learn may be relevant for other institutions planning to develop national DGRs.

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