

Experience of Poland in the application of The Espoo Convention to lifetime extension of NPPs



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Nuclear facilities and radioactive waste repository located in Poland



- The MARIA research reactor currently is the only operating nuclear reactor in Poland. It is a high-neutron flux pool reactor, water cooled and water and beryllium moderated, with design nominal thermal power of 30 MWt.
- The MARIA reactor is used for irradiation of Uranium targets, necessary for the production of radioisotopes for medical purposes and for training purposes.

Nuclear facilities and radioactive waste repository located in central Poland



- ✓ National Radioactive Waste Repository is a near-surface repository dedicated to a short-lived, low- and intermediate- activity radioactive waste disposal. It is also used to store, for an interim period, long-lived, mainly alpha radioactive waste, ready to be placed in a deep repository. The Rożan repository is operating since 1961, as the only facility of this type in Poland.

NPPs around Poland



- ✓ In a distance of approx. 300 km there are 10 NPPs with 23 power units around Poland in total.
- ✓ Poland was notified (pursuant to art. 3 of the Espoo Convention) twice about *Likelihood of lifetime extension to cause significant adverse transboundary impact* (South-Ukraine and Zaporizhzhya NPP in March 2017, Rivne NPP in January 2018).

South-Ukraine and Zaporizhzhya NPP

- ✓ Scope of proposed activity: production of electricity and heat energy.
- ✓ Scale of proposed activity: SUNPP with a total capacity of 3,000 MW and ZNPP with a total capacity of 6,000 MW.
- ✓ Description of purpose of proposed activity: ensuring the production of electricity at the achieved level before the new capacities construction or the decommissioning of power units.
- ✓ Rationale for proposed activity: accumulation of the necessary funds for the decommissioning of power units without a significant increase of consumer load.



South-Ukraine and Zaporizhzhya NPP

- ✓ Expected environmental impacts of proposed activity: the power of the nuclear units remains unchanged, the amounts of generated electricity will not increase, and consequently, an increase of the impact on the environment is not provided.
- ✓ The planned activity does not include any new construction or changes in the existing project.
- ✓ Transboundary impacts: carried out calculations and justification of the absence of a transboundary radiation impact on the environment and the human population as consequences of discharges of radioactive substances from the SUNPP and the ZNPP under normal and emergency event operation.



Rivne NPP

- ✓ Generation of electrical and thermal energy using nuclear power (water-cooled water-moderated nuclear thermal reactors VVER-440 and VVER-1000)
- ✓ Transboundary and radiological impact on the environment and human population of SS RNPP will be assessed only based on radioactive releases under normal operation, as well as emergency conditions and design basis accidents.
- ✓ Chemical and physical impacts are neglected based on the level of their impact limited by controlled access area of SS RNPP (2.5 km around NPP).
- ✓ Affected countries: Republic of Belarus, Republic of Poland, Slovak Republic, Hungary, Romania, Republic of Moldova.



CONCLUSIONS – OVERCOMING CHALLENGES:

- ✓ Poland do not have any NPP facility
- ✓ In a distance of approx. 300 km there are 10 NPPs with 23 power units around Poland in total.
- ✓ Poland was notified (pursuant to art. 3 of the Espoo Convention) two times about *Likelihood of lifetime extension to cause significant adverse transboundary impact* (South-Ukraine and Zaporizhzhya NPP in March 2017, Rivne NPP in January 2018).
- ✓ In both cases no *significant adverse transboundary impact* was examined, nevertheless, due to the precautionary principle, Poland was notified under art. 3 of the Espoo Convention.
- ✓ In both cases Poland decided to take part in the procedure as an Affected Party.







Thank you for your attention

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