

Good Practice of international Environmental Impact Assessment (EIA) processes for nuclear power plants

Executive Summary

The announcement of the Slovak Republic to conduct an EIA for the planned nuclear power plant Mochovce unit 3 and 4 raises the question, what information and data is needed from the project developer to make a useful assessment possible.

This study gives an overview of current legislation in the field as well as Good Practice Methods. Before a nuclear installation receives a building permit in the EU, the Environmental Impact Assessment needs to be concluded; this is also the case for changes in projects which had already been licensed. Moreover, states and the public in these states, which could be affected by the impacts of this installation have the right to take part in a transboundary EIA process according to the ESPOO Convention.

The Austrian Institute of Ecology prepared several expert assessments for international EIA processes for NPP in the EU. This study now shows which data and information is a precondition to make a reliable assessment of a certain project possible and how individual projects handled this.

One legal basis is the Aarhus Convention consisting of three pillars: the public's right of access to environmental information, the right to participation in certain decision taking procedures with a relevance to the environment at a stage when all options are still open and the third is the access to courts if the mentioned rights are violated. The other very important legal tool is the EU EIA Directive (97/11/EC), which is also the implementation of the ESPOO Convention in EU law.

The usually most neglected aspect in EIA processes are the alternative options, the concrete reactor type and severe accident scenarios, which are indispensable for a meaningful assessment of environmental impacts.

The following table presents the findings:

Issue	Legal basis	Example Good Practice
Hearing	suggested as an option in the EIA directive	Temelin NPP construction changes (CR), 2 hearings in Austria Paks NPP (HU) capacity increase, 1 hearing in Austria
Comparison of electricity generation options	alternatives are foreseen in the EIA directive, however, not in such detail	Cernavoda-3/4 (Romania): comparison of uranium, coal and gas
Technical specifications of the planned reactor	not explicitly demanded, however an essential detail for assessing (transboundary) impacts	Generic Design Assessment (UK) (Strategic Assessment) Cernavoda-3/4 (Romania): Technical documentation of the reactor
Treatment of design basis, probability of accident and different scenarios	not explicitly demanded, however an essential detail for assessing (transboundary) impacts	Cernavoda-3 (Romania): data on core inventory Chmelnitsky-2/Ukraine: source term of DBA and BDBA
Description of the methods used for assessing environmental impacts (especially accidents)	demanded by the directive	New NPP in Lithuania additional information to

Issue	Legal basis	Example Good Practice
		Olkiluoto-4 (Finland)
Description of possible external impacts on the specific site (among others air traffic, earthquakes, floods)	not explicitly demanded, however an essential detail for assessing (transboundary) impacts	Cernavoda-3 (Romania)
Nuclear waste disposal	demanded by EIA directive 85/337/EEC	Olkiluoto-4, Loviisa-3 (Finland)
Description of uranium mining	not explicitly demanded, however, natural resources are an issue in the EIA directive 85/337/EEC	Fennovoima- new NPP (Finland)