

NGO comment on the EIA procedure for the planned lifetime extension of NPP Cernavoda-1/Romania

Submitted via the Austrian Espoo Contact Point: Ursula.platzer@bmk.gv.at

Submitted via City of Vienna: post@ma22.wien.gv.at

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The signatories welcome this transboundary Environmental Impact Assessment (EIA) in the light of the discussion in the framework of the Espoo Convention concerning a binding EIA for NPP lifetime extension projects.

The Cernavoda-1 reactor is in operation since 1996. CANDU reactors have a design life of 30 years. The lifetime shall be extended from 2029 for 30 years according to an information from Nuclearelectricas's website. This would result in a total lifetime extension of even 33 years.

Alternatives:

The Espoo Convention and the EIA Directive require the assessment of alternatives of a project. In the EIA documents, alternatives are only given for refurbishment options.

However, **we demand that the EIA report presents energy production alternatives to the lifetime extension**. In response to the climate crisis, energy efficiency and energy saving measures have to be the most important options for an alternative scenario, new electricity production should be based on renewable energies with its steadily decreasing costs and faster availability.

A long-term prognosis of the Romanian energy needs should be part of the EIA Report.

Risks of long-term operation of the reactor type

The design of the CANDU-6 reactors is from the 1970ies and already outdated, in particular the possibility of severe power excursions in the event of safety system failure and vulnerability to external hazards. The ageing of the pressure tubes is also a persistent problem for existing CANDU systems.

Risks of the site

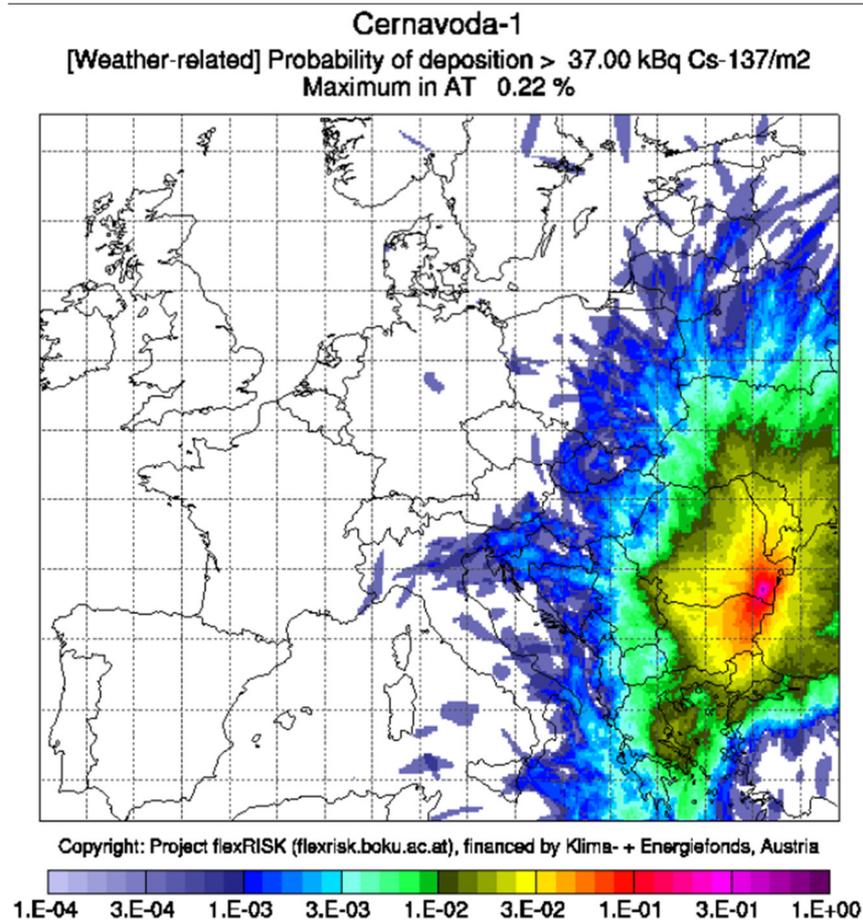
Romania is one of the most active seismic regions in Europe. The Cernavoda site is located in the Vrancea zone. The stress tests in 2011 found that this hazard was not appropriately recognised.

Risk of severe accidents

The most important question is: Can an accident occur in the old NPPs that has significant impacts on the surrounding areas, and also on other countries?

Even if a severe accident has a very low probability, the risk is not eliminated. The EIA Report needs to provide more data on the assessment of severe accident consequences; it is insufficient to restrict dose calculations to 100 km. Source term data need to be provided.

The research project flexRISK shows that a core disassembly with early containment failure in Cernavoda-1 could release a large part of its radioactive inventory, assessed with 8.16 PetaBecquerel Cs-137. The following flexRISK figure shows the weather-related risk for Europe to be contaminated with Cs-137 above 37 KiloBecquerel Cs-137 per m² in case of such an accident happening.



Under unfortunate weather conditions, many countries in Europe could suffer a high Caesium contamination of more than 37 kBq/m²; the weather-related risk for Austria is 0.22%. It is not enough to calculate doses for a distance up to 100 km.

Safety standards for new NPPs cannot be implemented for the old plants. The risk of a severe accident is increasing with the age of an NPP. But not only material and design problems occur. The risk of terrorist attacks has increased, and the old plants are not fit to withstand modern threats. Unfortunately, it cannot be excluded any longer that NPPs become targets in a war, especially if they are near the Russian border.

Due to climate change, the risk of flooding increased, Also, the risk of extreme weather events has increased.

The EIA Report shall include an assessment of how the risk changes with increasing age of the plant and due to new threats like terror, war, and climate change phenomena.

The EIA Report shall also include accident calculations with the highest source term for which the risk is not zero, and dispersion calculations for all of Europe.

Nuclear waste management

Before any lifetime extension or new-build, Romania should ensure its nuclear waste management: As of today, Romania is far from having a final repository for spent fuel.

We are looking forward to receiving information, if and how our recommendations are integrated in the EIA decision.

With best regards

Austrian Institute of Ecology

Gabriele Mraz

Seidengasse 13/3, 1070 Wien, Austria

mraz@ecology.at

Global 2000 | Friends of the Earth Europe

Patricia Lorenz

Neustiftgasse 36, 1070 Wien, Austria

patricia.lorenz@foeeurope.org

Nuclear Transparency Watch

Nadja Železnik (Chairwoman)

38, rue Saint Sabin, 75011 Paris, France

nucleartransparencywatch@gmail.com

Anti Atom Komitee

Gerold Wagner

Linzer Straße 52, 4240 Freistadt, Austria

office@anti.atom.at

Mütter gegen Atomgefahr | Mothers against Nuclear Hazard

Gabriele Schweiger, Obfrau | Chair

St.-Peter-Straße 11, 4240 Freistadt, Austria

schweigab@gmail.com

Calla - Sdružení pro záchranu prostředí z.s.

Edvard Sequens

Fráni Šrámka 35, 370 01 České Budějovice, Czech Republic

edvard.sequens@calla.cz

NOAH Friends of the Earth Denmark

Niels Henrik Hooge

Studiestræde 24, DK-1455 København K, Denmark

nielshenrik@noah.dk

Grup de Científics i Tècnics per un Futur No Nuclear

Pep Puig i Boix

Catalunya

gctpfnn@energiasostenible.org

Verein Lebensraum Waldviertel

Gottfried Brandner (Obmann)

3812 Groß-Siegharts, Austria

gb@wvnet.at

Waldviertler EnergieStammtisch

Renate Brandner-Weiß (Teamsprecherin)

3580 Grünberg 4/2, Austria

energiestammtisch@wvnet.at