NGO comment on the EIA scoping procedure for the planned lifetime extension and power uprate of NPP Olkiluoto 1&2/Finland

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 EIA in the light of the discussion in the framework of the Espoo Convention concerning a binding EIA for NPP lifetime extension projects.

The two reactors, in operation since 1978 and 1980, have already undergone one lifetime extension from the originally planned 40 years up to 60 years, which will be reached in 2038. The project at hand comprises a lifetime extension for additional 10 or even 20 years up to 2048 or 2058, respectively. The reactors would be by then 70 or even 80 years in operation. While the reactors were commissioned for a thermal power of 2,000 MWth, they had already a power uprate up to 2,500 MWth; an additional uprate up to 2,750 MWth is envisaged.

The next step of the EIA procedure, the EIA Report, needs to cover the following issues:

Alternatives:

The Espoo Convention and the EIA Directive require the assessment of alternatives of a project. In the scoping documents, alternatives are given for the period of lifetime extension (10 or 20 years) and for a yes or not to the power uprate.

However, **we demand that the EIA report presents energy production alternatives to the now already 46-year-old nuclear power plant**. 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.

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

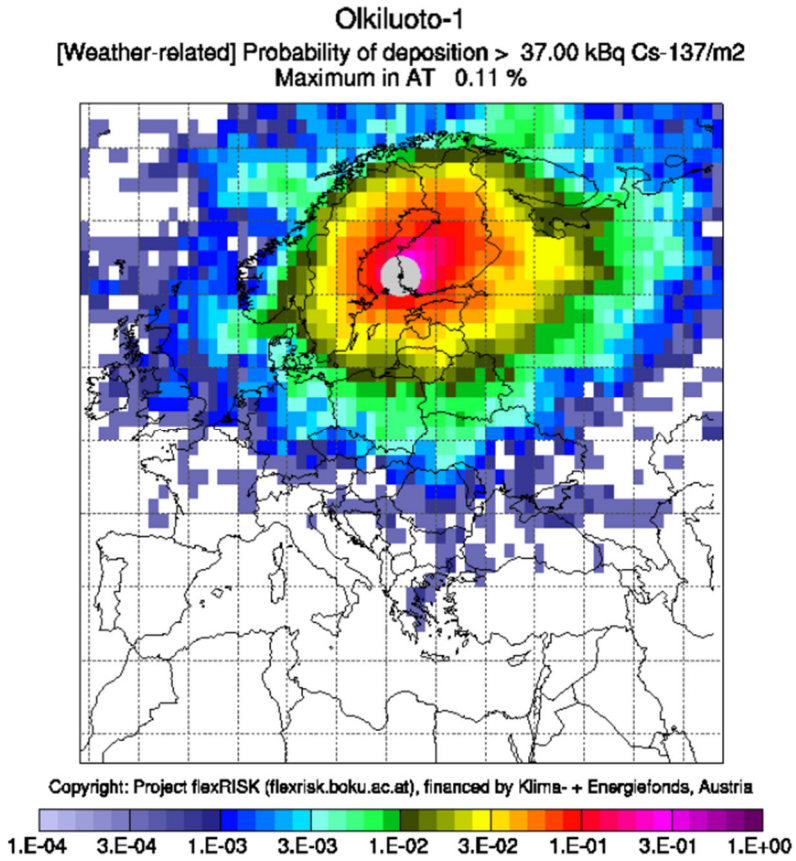
Risk of severe accidents

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 calculations to a source term of 100 TeraBecquerel Caesium-137 and dispersion calculations up to a distance of 1,000 km. This distance would cover only a small region of Europe reaching to northern Germany and up to half of Poland.

The research project flexRISK shows that a reactor pressure vessel failure with early containment failure in Olkiluoto unit 1 or 2 could release a large part of its radioactive inventory, assessed with 25.42 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 m^2 in case of such an accident happening.



Under unfortunate weather conditions, almost every country in Europe could suffer a high Caesium contamination of more than 37 kBq/m^2; the weather-related risk for Austria is 0.11%. Therefore a 1,000 km limit for dispersion calculations is not adequate.

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, which is of special importance for NPPs situated at the coast. The accident in Fukushima has shown what horrible impacts can occur when water intrudes in an old NPP. Also, the risk of extreme weather events has increased.

The EIA Report shall include an assessment of how the risk changes with increasing age 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 and not only for a radius of 1,000 km.

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

With best regards