

# Press Briefing

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## **Presentation of the first international study on the risks of lifetime extensions of old nuclear power plants**

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# **Presentation of the first international study on the risks of lifetime extensions of old nuclear power plants**

The “Alliance of Regions for Phasing out Nuclear Power across Europe” presents the first international study on the risks of lifetime extensions of ageing nuclear power plants. At a time of significant market turbulences in the atomic sector, maintaining nuclear energy capacity means to extend the operating lifetime of ageing reactors beyond their original design base. Nuclear power plants in the EU are aging: The 125 reactors have an average age of 33.4 years. Ageing nuclear reactors are highly prone to accidents, and the inhabitants of Europe’s regions are being exposed to mounting risks. The present study, prepared by INRAG (International Nuclear Risk Assessment Group) in collaboration with top experts from different countries, highlights the importance of aging nuclear power plants, dealing with the risks of aged equipment and the required continuous increase in safety levels of nuclear power plants in Europe in general and on the basis of individual case studies.

The basic statements of the first interim report of the study presented today are:

- **The continued operation of ageing plants significantly increases nuclear risks in Europe**  
Ageing poses a significantly increased risk of radioactive releases and of serious nuclear accidents. This significantly increased risk is further increased by the continued operation of ageing plants through lifetime extensions. Even partial retrofitting can do little to change this.
- **The nuclear risks of ageing plants needs to be better understood in order to assess safety.**  
Operators and supervisory authorities are responsible for the testing and licensing of ageing nuclear power plants. However, their statements on the safety of a plant are only legally normative.
- **It is clear that ageing processes increase the risk of malfunctions and accidents.**

The cause of many safety-relevant events can be traced back to ageing processes. This is demonstrated through operating experience. Ageing processes such as corrosion, wear and tear or embrittlement reduce the quality of safety equipment and even lead to failure.

- **Nuclear power plant design based concepts of the 1970s and 1980s are in fact outdated in terms of current safety technology.**

Some of the construction and operating permits for many nuclear power plants are already 30 years old or more. Back then, they were approved as "safe" for operation after the approval tests. However, the inspection instruments available at that time were far less developed than today and the inspection standards were at a much lower level.

- **Many nuclear power plants are operated beyond the limit of their original technical design, and represent an outdated technical level.**

The technical design of many nuclear power plants were often carried out for operating periods of 30 or 40 years. In practice, however, this period does not represent a definitive limit, as many European examples demonstrate. It is unfortunate to reflect that reactor lifetimes are even extended without fundamental modernisation.

- **The statement that the safety of old nuclear power plants has been continuously improved by retrofitting obscures the view.**

- Retrofitting was often carried out to remedy defects in the installation or to protect against risks which had not been identified at the time the permit was issued.

- **In principle, retrofitting measures are limited. Essential conceptual weaknesses of ageing nuclear power plants still exist**

- Safety requirements according to the current state of science and technology cannot be fully implemented in the design of ageing nuclear power plants. Key weaknesses of historic safety concepts cannot be eluded.

- **The possibilities of ageing management are limited**

Rather like an old car, repair and replacement of components affected by ageing can only be limited locally and temporarily manage. Ageing processes may be interrupted or slowed down, but they are never prevented.

- **Retrofit measures and repairs in ageing plants always involve additional risk.**  
By intervening in the safety technology of the existing plant, new risks may be created, for example through unforeseen interactions. When switching to new technical solutions, there is the problem of compatibility with the existing technology.
- **Lack of documentation and information makes it difficult to assess the safety of existing installations**  
Safety certificates for ageing nuclear reactors often reach insurmountable limits if the existing technical documents are faulty, partially or completely missing.
- **Lack of transparency makes it difficult to assess the risks for third parties**  
The process of operational safety review is seldom transparent to third parties. There is a lack of procedural provision which does not ensure sufficient access to information and adequate participation in decision-making processes for all parties concerned.
- **There is no possibility for international participation, although the risks may have transboundary consequences.**  
Binding international participation is not provided for in most procedures for proposed lifetime extension. Whilst the construction of new power plants today necessarily involves international participation, decisions concerning continued operation of ageing plants is taken sovereignly by nation states – importantly, given the risks, without the involvement of neighbouring states.
- **Therefore, nuclear plant life extension risks remain occluded for those potentially affected, since they remain uninformed about them.**  
The information released to the public is usually less than comprehensible and fails to address critical points of safety. There is no obligation on the part of the operators and the authorities to provide such information.
- **It is important to note that there is no international review body and no internationally binding rules for the implementation of safety requirements for existing installations.**  
Despite attempt at international regulation, the reality is, there exists no real substantive and independent regulatory oversight. In addition, the rules for ageing

plants contain significant loopholes, e.g. measures are only implemented if it is economically reasonable. For example, the regulatory imperative of ALARP (as low as reasonably practicable).

**Oberösterreichs Umweltlandesrat Rudi Anschober:** *„The study demonstrates the dramatic safety risks of the current practice of lifetime extensions of old nuclear power plants. Now there is an urgent need to act at European level - it needs uniform EU standards to limit reactor lifetimes and the rising risk. We therefore inform the public, the European Parliament and the Commission about the first interim results of the major risk study and present our demands. The Alliance of Regions calls for clear transparent licensing procedures involving neighboring regions through a cross-border EIA and a maximum operating time of 40 years for nuclear power plants. This is the only way to insure to limit the growing risk. Following today's presentation of the interim report, communicating the required consequences to the European Parliament and the Commission, the final report of the study will be presented by the Alliance at an event in autumn to launch the political discourse.“*

**Rebecca Harms, Member of the European Parliament, Co-Initiator of the Regions' Network**

*"In view of the risks associated with the extension of operating lifetime of nuclear power plants, it is irresponsible that the European Commission continues to focus strongly on nuclear power in its climate strategy and gives it a major role in the European electricity mix. The Commission assumes that the operating life of many reactors will be extended to 60 years. This strategy is very dangerous and very expensive. The Commission is deliberately underestimating the costs of necessary safety upgrades. Investments in renewable energy and energy efficiency measures would achieve significantly more and sustainable climate protection than the short-sighted attempt to delay the end of high-risk nuclear power technology by accepting higher risks."*