



# NUCLEAR TRANSPARENCY WATCH

Prevent and anticipate through transparency and participation

# NUCLEAR LIFE-TIME EXTENSION JUSTIFICATION and PUBLIC PARTICIPATION

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# NUCLEAR LIFE-TIME EXTENSIONS

## the situation

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- **86** nuclear reactors  
**to reach end of initial foreseen technical lifetime**  
in ENSREG countries in the next 10 years
- **Average age** nuclear reactors in ENSREG countries:  
**32 years**
- Currently decisions in process:  
BE, CH, CZ, ES, FI, FR, HU, NL, SE, SI, UK

# NUCLEAR LIFE-TIME EXTENSIONS

## the justification

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- Justification:  
**lack of decommissioning funds**
- UA EIA justification for Zaporyzhzhe and SouthUkraine:  
“Accumulation of the necessary funds for the decommissioning of power units without a significant increase of consumer load”
- But also major role in NL, ES and BE
- Concern:  
**Economic arguments interfere with risk management**

# POSITION

## of Nuclear Transparency Watch

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**Natural legal, moral and logical right of citizens** confronted with decisions of these impacts to be consulted.

**The logical instruments** for that are the **Espoo and Aarhus Conventions** and (transboundary) **environmental impact assessment**.

# ENVIRONMENTAL IMPACTS 1/3

## of life-time extension of nuclear reactors

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**10 or 20 years extra means 25%, 33% or 50% longer operation & impacts:**

- Increased use of **uranium**;
- Increased production of **radioactive wastes**
  - for >90% of radioactive content no permanent solution exists;
  - accumulation of spent fuel or vitrified waste in interim storages;
- Increase exposure to the risk of a severe nuclear accident with substantial emissions of radioactive material  
**an increased risk of a Fukushima type accident;**
- **The risk itself grows:**
  - Risk of accident increases exponentially with ageing (bathtub curve);
  - Upgrades increase radioactive inventory;
  - Upgrades only give a temporary decrease of risk growth;
  - Loss of knowledge and skills.

# ENVIRONMENTAL IMPACTS 2/3

## of life-time extension of nuclear reactors

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- Construction (for some reactors), and physical changes over the lifetime **never submitted to an environmental impact assessment:**
  - Ongoing ageing (bathtub curve!), upgrades, uprates, MOX introduction (all including the impacts of a prolonged lifetime!), related license renewals and license changes;
  - These are de-facto tiered (layered) decisions leading to a, from the perspective of the public, de facto life-time extension.

# ENVIRONMENTAL IMPACTS 3/3

## of life-time extension of nuclear reactors

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- **The environment has changed:**
  - **physical** (amount of inhabitants, nature areas, agricultural activity)
  - **economic** (value of surrounding economic activity, form of economic activity – for instance the chemical processes near Doel)
  - **political** (need for energy policy actions because of climate change, development of energy structure and grid structure because of variable renewable uptake)
  - **Risk-perception** (no acceptance of more Fukushima-type accidents, higher risk reduction standards, standards should match standards for new reactors)

# THE DECISION

## leading to nuclear lifetime extension

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After the initial technical foreseen lifetime, there is always a form of decision that leads to life-time extension:

- an operation license prolongation;
- an exploitation license prolongation;
- approval of changes to either the operation or exploitation license;
- By the operator, followed by an administrative or political confirmation;
- A decision related to the Periodic Safety Review;
- tiered (layered) decisions (a mix of political, administrative and/or by the operator);
- In any other form.



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