



Information to ERDO-WG
September 2019

Norwegian Nuclear Dekommissioning (NND):
“We take responsibility for safe and cost-effective handling of nuclear waste and decommissioning of Norway's nuclear facilities”

ONE DAY, SON, ALL THIS WILL BE YOURS



The purpose of Norwegian Nuclear Decommissioning (NND)

NND shall be the national agency for cleanup of Norway's nuclear activities and safe disposal of nuclear waste. The tasks shall be carried out in a manner that ensures society's trust. NND will contribute to economically sound solutions within its area of responsibility.

Main tasks

- a) Plan and ensure decommissioning of the Norwegian research reactors
- b) Plan and ensure safe handling and storage of Norwegian spent nuclear fuel
- c) Provide solutions for radioactive waste from other sectors (e.g. industry etc.), where there are no other approved solutions.
- d) Manage nuclear infrastructure on behalf of the licensee
- e) Ensure statutory safety and security of the facilities being managed.
- f) Communicate effectively about the implemented measures.
- g) Provide advice on solutions, including formulating proposals for a comprehensive strategy for handling Norwegian nuclear waste.
- h) Participate in relevant international fora to develop competence, cooperation and knowledge development..

NND shall comply with health, safety and environmental requirements and shall follow governmental procedures and **best international practice.**



Important principles and values

- Credibility and trust
- Fact based
- Security and safety
- Cost efficiency and competence
- Our generation takes responsibility



More than just 2 reactors that will be decommissioned

- **Two sites; Halden and Kjeller**
 - 2 recent shut-down reactors
 - 2 reactors "decommissioned"
 - Laboratories
 - 5 storages for used fuel
 - Legacy waste
- + New facilities; waste management plant and storages

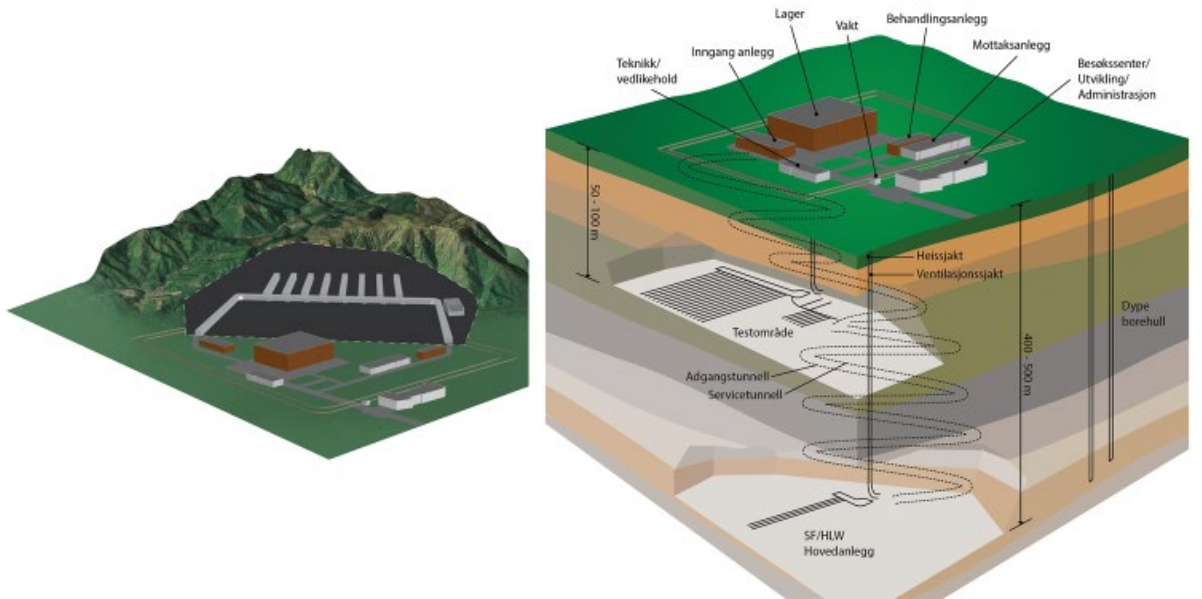
• 17 ton used fuel



Reactors in Halden and Kjeller



New national repository for radioactive waste and used fuel



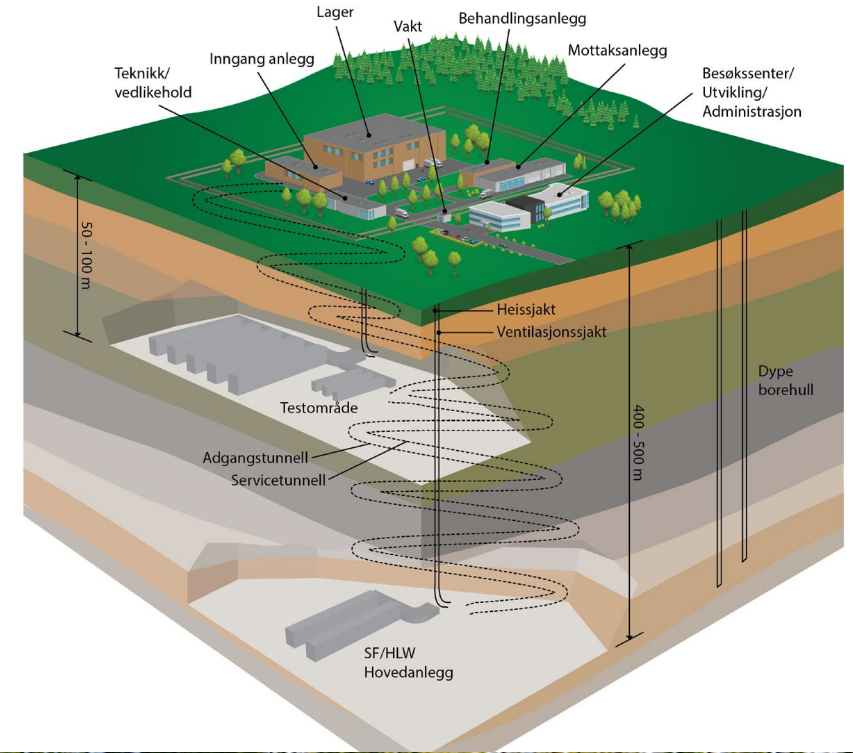
- Based on a willing community, We need a "social license"
- Handle radioactive waste for the next 100 year from decommissioning, industry, medicine etc.
- International cooperation
- Research and development

- Dual track approach (MNA/ERDO-WG)
- Borehole as an interesting option

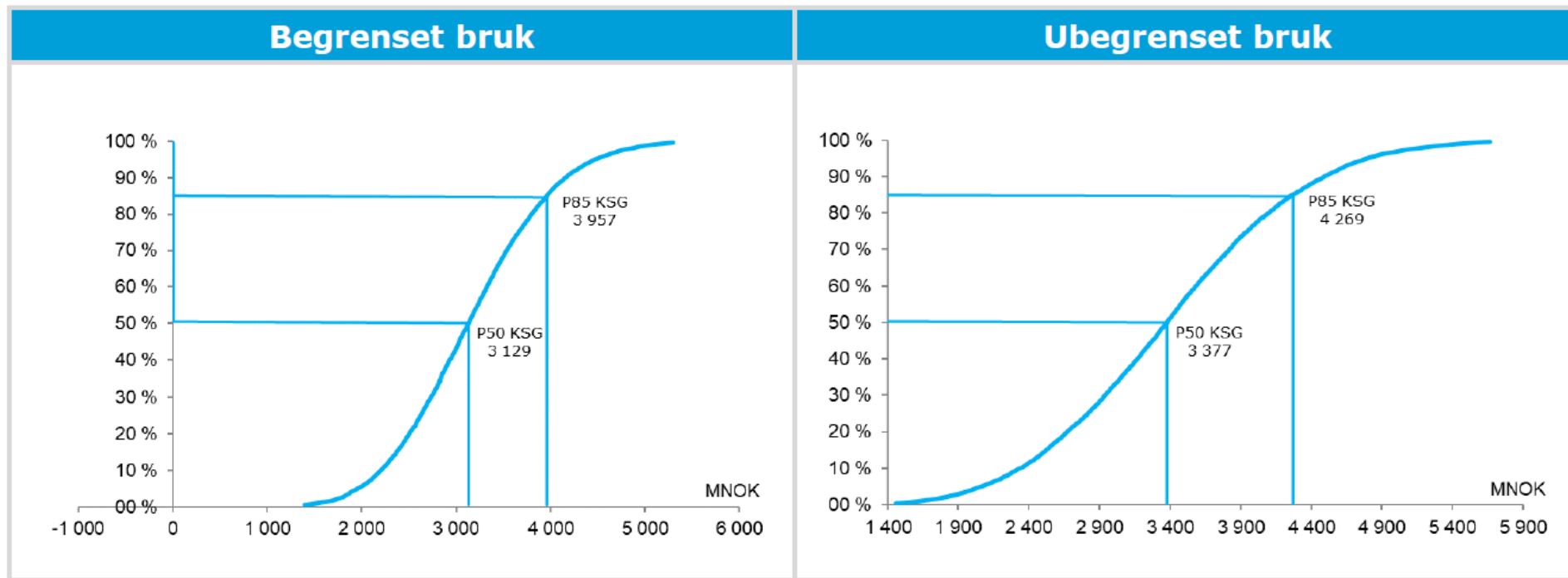
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Economy/forecast

What does NND plan to deliver?



Decommissioning of facilities in Kjeller and Halden



Span: 3.957 - 4.269 bill. NOK = 0,3957 – 0,4269 bill. EUR

- from conditional release to free classed release.
- P85

Based on ISDC

ISDC består av 11 hovedaktiviteter

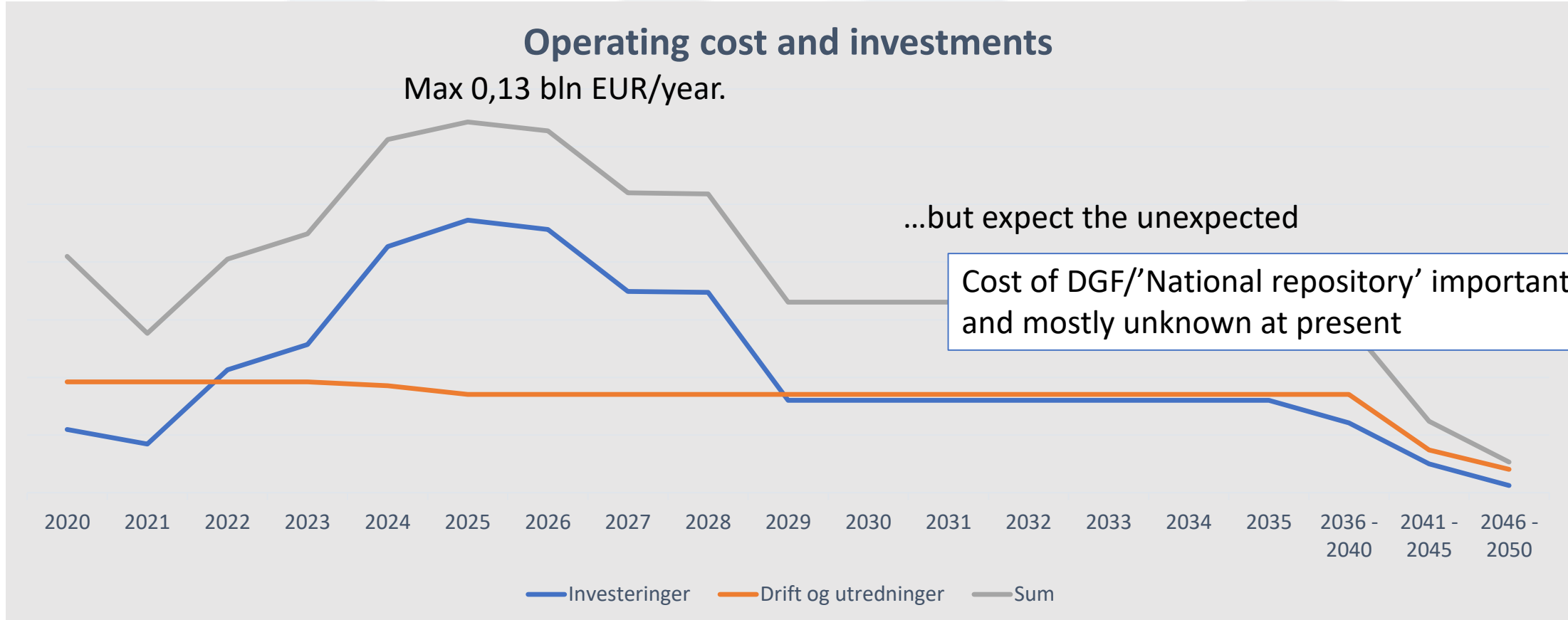
- 01 Pre-decommissioning actions
- 02 Facility shutdown activities
- 03 Additional activities for safe enclosure or entombment
- 04 Dismantling activities within the controlled area
- 05 Waste processing, storage and disposal
- 06 Site infrastructure and operation
- 07 Conventional dismantling, demolition and site restoration
- 08 Project management, engineering and support
- 09 Research and development
- 10 Fuel and nuclear material
- 11 Miscellaneous expenditures

First level 04 Dismantling activities
 Second level 04.0500 Dismantling of main process systems and structures
 Third level 04.0501 Dismantling of reactor internals

Preliminary cost 2020 – 2045

About 15* - 20? bln NOK in total

Financed by Norwegian taxpayers (State financed) – no long-term funds at present



* Estimated in 2016



Questions?

Please do not hesitate to reach out

Pal.mikkelsen@nnd.no

post@nnd.no

