Regulating nuclear disposal facilities - What is needed for success?

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Spent fuel geological disposal in Olkiluoto – KBS-3
IN DEPTH

A 100,000-Year Tomb for Finland’s Nuclear Waste

Other countries have hit political roadblocks in finding a lasting fix to the world’s nuclear-waste problem. Finland, meanwhile, has been quietly breaking ground

WSJ 24.1.2017

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**nature**
International weekly journal of science

Why Finland now leads the world in nuclear waste storage

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**wnn**
world nuclear news

Finnish regulator approves Posiva's waste repository plan

12 February 2015

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**strategic insights**

Finland: Journey deep into the Finnish caverns where nuclear waste will be buried for millenia

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**stuk**
SÄTEILYTVÄKESUS
STRÅLESÄKERHETSCENTRALLEN
RADIATION AND NUCLEAR SAFETY AUTHORITY

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**Business Insider Nordic**

Finland’s "100'000-year tomb" for nuclear-waste storage is gaining the world’s admiration

25 Jan 2017 11:10 AM
TRUST

How to build and how to maintain?
Key factors supporting progress in Finland

Political will, courage and responsibility to find the end-solution

Committed and persistent implementation and regulation

- Government decision on waste management principles in 1978
- Government’s strategy for spent fuel disposal set in 1983
- Clearly defined roles and licensing process
- Timely and focused communication with public
- Waste producers direct responsibility
- Management and commitment to follow government strategy
- Active regulatory participation from the early phase
Basics for regulatory success

• Up-to-date and state-of-the-art safety regulations for disposal

• Development of regulatory approaches for repository licensing and oversight of construction

• In-house expertise for all safety relevant fields

• Approach for regulatory interaction and dialogue with applicant and other stakeholders
Clear and step-wise process

Late 1970’ - 2000

First safety requirements
Review of developing safety case
Dialogue with Posiva and stakeholders

Decision-in-Principle

2001 - 2015

License application review strategy
Oversight of ONKALO construction
Competence building

2016 - 2023

Updated safety requirements
Oversight of encapsulation plant and disposal facility construction

Application for the operating license
Key success factors in Finland and in STUK’s regulatory work

Commitment and courage to make decisions
- Political support
- Commitment to national policy and strategy
- Implementation in step-wise approach

Active involvement, development of regulatory framework
- Clear regulatory framework
- Development of regulatory approach parallel with R&D
- Timely and focused communication with the stakeholders

Competence development
- Regular follow-up and review of the spent fuel disposal program
- Regulators safety assessment capabilities
- Active dialogue with Posiva