

Expert Group for Nuclear Waste Disposal EGT

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Role, Responsibility and Recent activities

Martin Herfort (Secretary)
on behalf of **Simon Loew**
Chairman

ABG Meeting
Berlin, 4th May 2015



Constitution and modus operandi



Geoffrey Milnes

- International scientific-technical expert group (Switzerland, Germany, Austria)
- 7 members from research institutions, independent from the implementer
- Financial agreements between individual members and ENSI
- min. 4 closed meetings per year
- Annual working program established with ENSI
- Public statements and hearings
- Secretariate: ENSI (Safety Inspectorate)



Simon Löw



Rolf Kipfer



Wulf Schubert



Friedemann Wenzel



Annette Johnson



Rainer Helmig



Role

EGT's role is defined in the sectoral plan (site selection program):

- Support and advise the Nuclear Safety Inspectorate (ENSI)
- Evaluate applications for geological site investigations, proposed selection of siting regions, long term safety and engineering feasibility of repository construction
- Participate
 - in the Technical Forum on Safety
 - in technical discussions with the implementer and governmental organisations
 - in Regional Conferences and public hearings

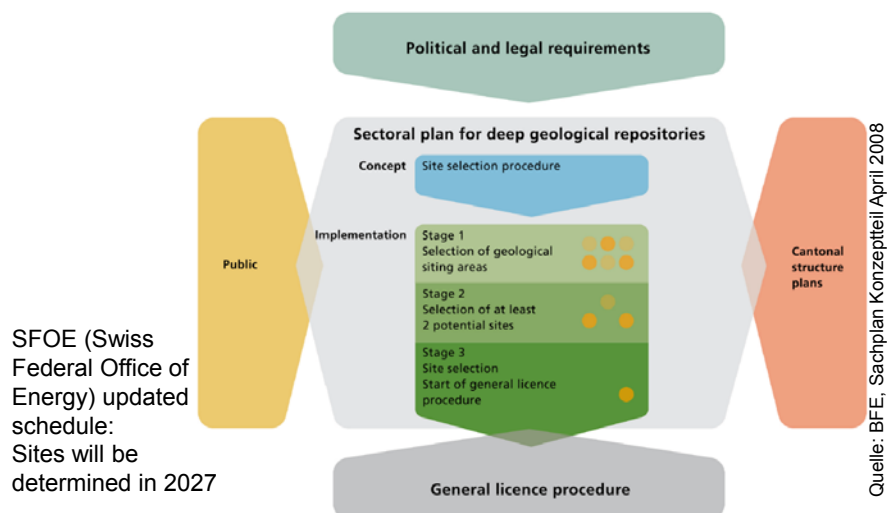
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Sectoral Plan for Swiss Site Selection

Position and interrelationships for the sectoral plan for deep geological repositories



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Current Status of Sectoral Plan and Key Issues

Public discussion about proposed surface facilities and locations
→ finished

- Intensive controversial discussions in 2013 (criteria) and 2014 (proposed surface facility locations)

The implementer submitted documents about narrowing potential sites and proposed underground and surface sites (January 2015)

- Assessment by authorities, including EGT
- Heavy workload challenges part-time members
- EGT-report will be published together with ENSI's assessment early 2016.

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General Challenges

EGT is expected to contribute to the Sectoral Plan:

- Publish timely technical review reports (EGT works with part-time members)
- Focus on questions of relevance for upcoming decisions of Stage 2 SGT
- Guarantee independence from the implementer, politics and the public
- Provide expert opinions in a highly dynamic running (stage 2 includes significant public participation)

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Meeting activities in 2014-2015

- Continuous participation in the Technical Forum on Safety
- > 4 closed meetings per year → partially opened for technical discussions
- 6 topic discussions with experts about the available and necessary knowledge base
- Governmental hearing about the safety of access tunnels and shafts

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Symposium «Rock Mechanics and Rock Engineering of Geological Repositories in Opalinus Clay and Similar Claystones»

Date: Friday, 14 February 2014
 Location: ETH Zurich, Department of Earth Sciences, Room C60, 8092 Zürich
 Time: 09:00am – 6:00pm

ENSI published [this web article to the symposium](#) (German).

Here are the [abstracts](#) and the [minutes](#) (German).

Presentation slides

A zip archive of PDF-files of the slides are provided here for download

[ZIP file](#) (pdf 54 MByte)

Please find the single presentations slides at the [speakers](#) page.

Video streams

Video streams of the presentations are provided at the website of ETH Zurich.

[Link to ETH Zurich](#)

Media

17.02.2014 [Beitrag von Schweizer Radio und Fernsehen SRF](#) (Text und Audio, German)

06.03.2014 [Beitrag in "Der Landbote"](#) (German)

Downloads

[Program](#) pdf (49 KByte)

[German minutes](#) pdf (282 KByte)

[Abstracts](#) pdf (134 KByte)

[Slides](#) (zip 54 MByte)

[Videos](#)

Homepage:
www.egt-schweiz.ch

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Key topics identified for 2015-2016 (1)

Regional geological and surface processes

- **Future geodynamic and neotectonic evolution**
- Long term earthquake characteristics and near field impacts
- **Radionuclide migration and dilution into the biosphere**
- **Tectonic framework, fault reactivation and fracturing** in Northern Switzerland (proposed repository siting region for high-level radioactive waste)

Processes in near field and host rock (clay shales)

- **Gas transport processes and induced deformation**
- Radionuclide transport mechanisms in clay shales
- **Geochemical impacts** (H₂, sulfate reduction etc.)
- Preferential flow paths and **self-sealing** of fractures and faults

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Key topics identified for 2015-2016 (2)

Technical barriers

- **Corrosion mechanisms and gas production rates** of steel canisters
- Layout and performance of seals

Engineering suitability

- **Mechanical constitutive equations of Opalinus Clay**
- **Conceptualization and feasibility of repository layout and access** (by shafts and ramps)
- **Risk assessment of construction and operation of underground facilities**

Data assessment

- **Results from the 2D seismic survey** at proposed sites
- Consistency with results from demonstration experiments

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