

KEM-06 - Risk assessment for UDG and EGS

Ultra-deep geothermal systems (>4km depth) as a source of heat and electricity have increasingly come into focus in the debate about the sustainability of The Netherlands' energy supply. In contrast to the widely used "conventional" geothermal energy, there is no experience with UDG projects in The Netherlands and the application of reservoir stimulation technologies (EGS) which will be most likely used in the UDG context to improve reservoir permeabilities.

As the responsible supervisory agency, the State Supervision of Mines (SodM) tendered a research project as part of the knowledge programme KEM focusing on the hazards and risks associated with UDG/EGS projects during all project phases.

A consortium of Witteveen and Bos, Raadgevende Ingenieurs, TUDelft, VITO, Newell and Q-con GmbH investigated potential risks associated with UDG activities resulting in

1. a risk inventory containing most important risks for UDG projects in The Netherlands with consequences and mitigation measures using the bowtie methodology and
2. risk classification schemes for project developers to obtain project-specific risks and possible mitigation measures.

The study provides a comprehensive overview of the Health, Safety and Environmental risks of UDG and EGS in the Netherlands and can be downloaded [here](#).