

EAGE

27-31 OCTOBER 2025
ROTTERDAM, THE NETHERLANDS

 **GET2025**

GEO THERMAL **ENERGY**

CONFERENCE

**ACCELERATING INNOVATION IN THE NETHERLANDS ON GEOTHERMAL ENERGY
(GEO4ALL)**

Darren Jones and Radboud Vorage

SHORT INTRODUCTION



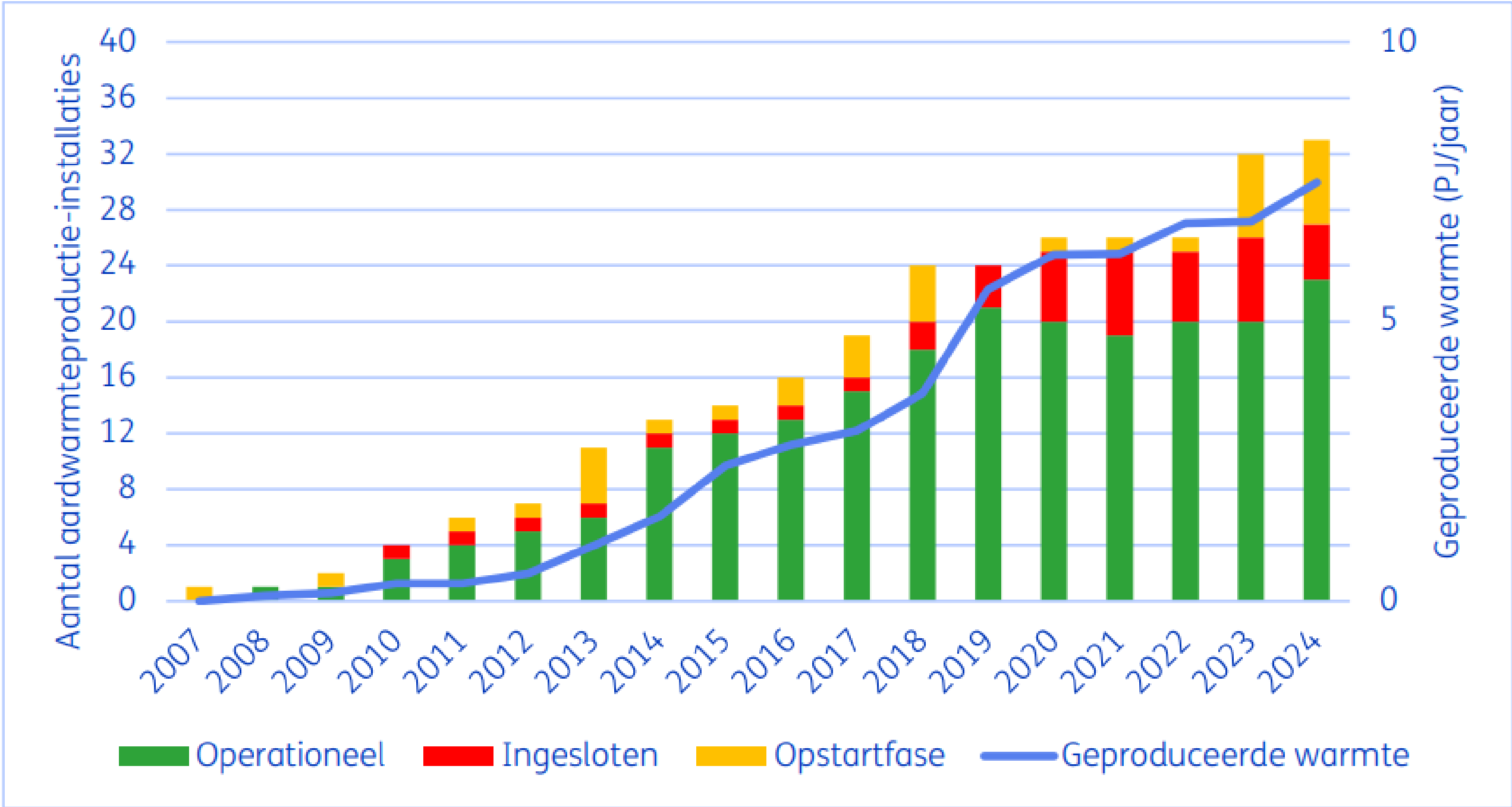
Radboud Vorage
Director of geothermal project Koekoekspolder
Chairman SC of GEO4ALL



Darren Jones
Geoscience and Technology
GEO4ALL Programme Manager

HISTORY OF GEOTHERMAL ENERGY IN NL

Start in 2007 and steady growth in heat production



GEO THERMAL ENERGY USERS IN NL

Horticulture sector leading the way



Aardwarmte Vogelaer



Aardwarmtecluster Koekoekspolder

MASTERPLAN GEOTHERMAL ENERGY 2018

Recommendations on innovation

Topics

- Safe design of systems and interaction with the reservoir (quantifying seismic risks)
- Increasing the value of geothermal heat (build environment, cascading, heat networks, etc.)
- Reducing the cost of geothermal heat and increased lifespan of geothermal installations

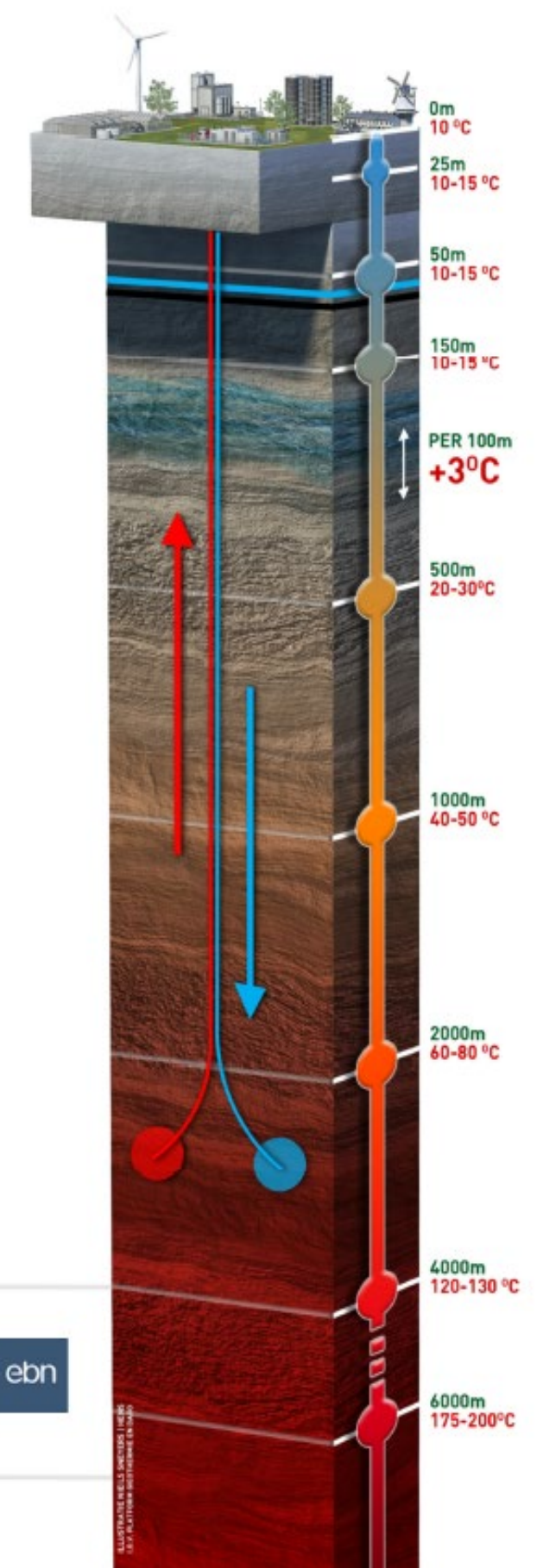
Methods

- Knowledge transfer (from gas/oil industry and other countries)
- Applied research (gathering data from existing projects)
- Demonstration/pilot projects
- Make a list of required innovation

Masterplan Aardwarmte in Nederland

Een brede basis voor een
duurzame warmtevoorziening

Mei 2018



BUILDING INNOVATION AND KNOWLEDGE NETWORKS

Geothermie Nederland and its partners



Mede mogelijk gemaakt door



THE GEO4ALL INNOVATION PROGRAM 2024-2028



Hand-over to Darren Jones

GEO4ALL

4 year geothermal research programme



- Objective: improve efficiency, safety and public understanding
- Output : data & insights to support policy development and regulatory frameworks
- Consortium: 22 partners – all geothermal value chain
- More info: please scan QR code



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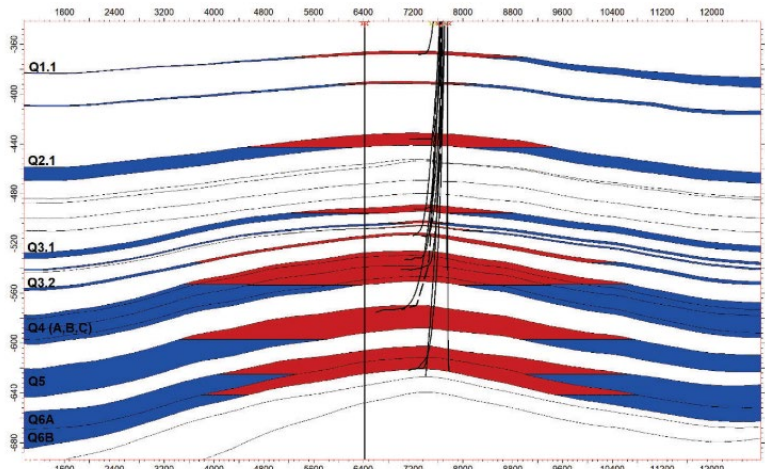
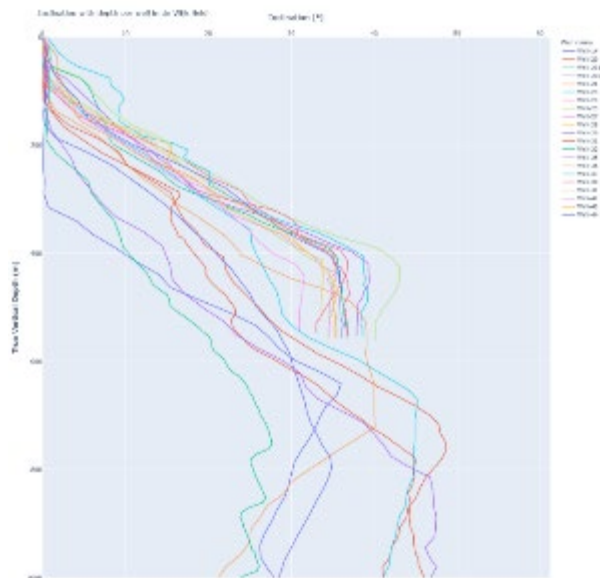
- WP1 – shallow geothermal
- WP2 – marginal reservoirs
- WP3 – closed loop systems
- WP4 – coldfront & induced seismicity
- WP5 – geothermal production data



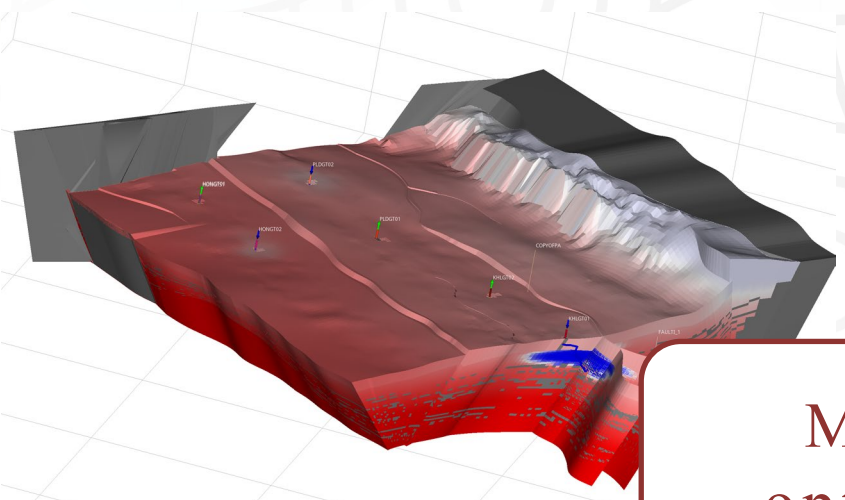
HIGHLIGHTS



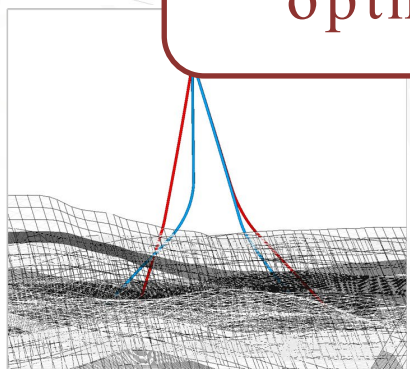
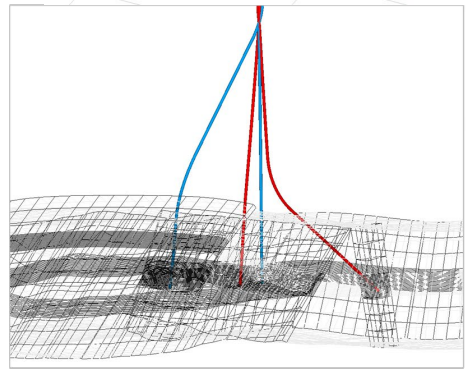
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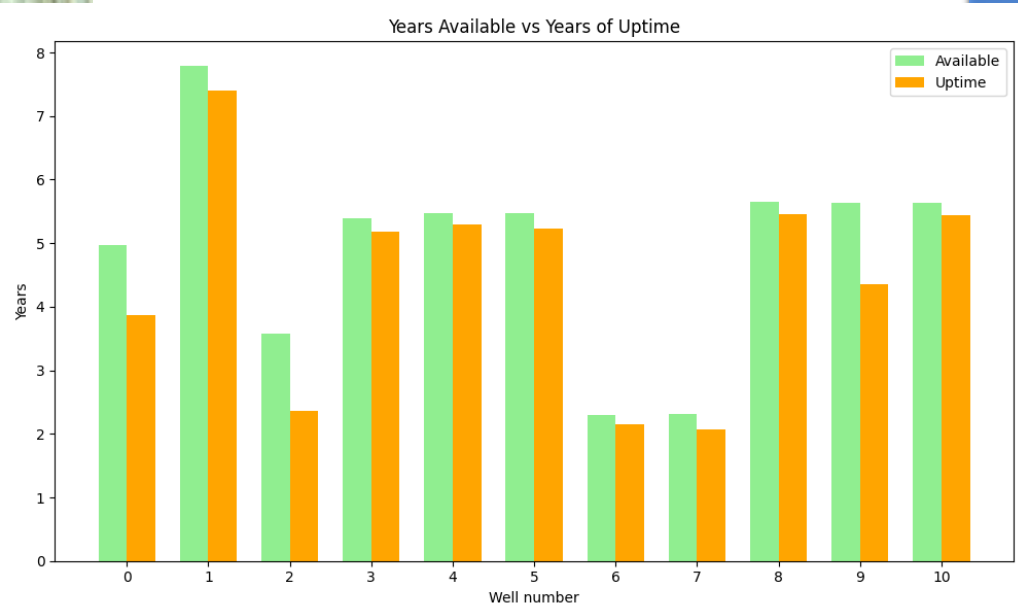
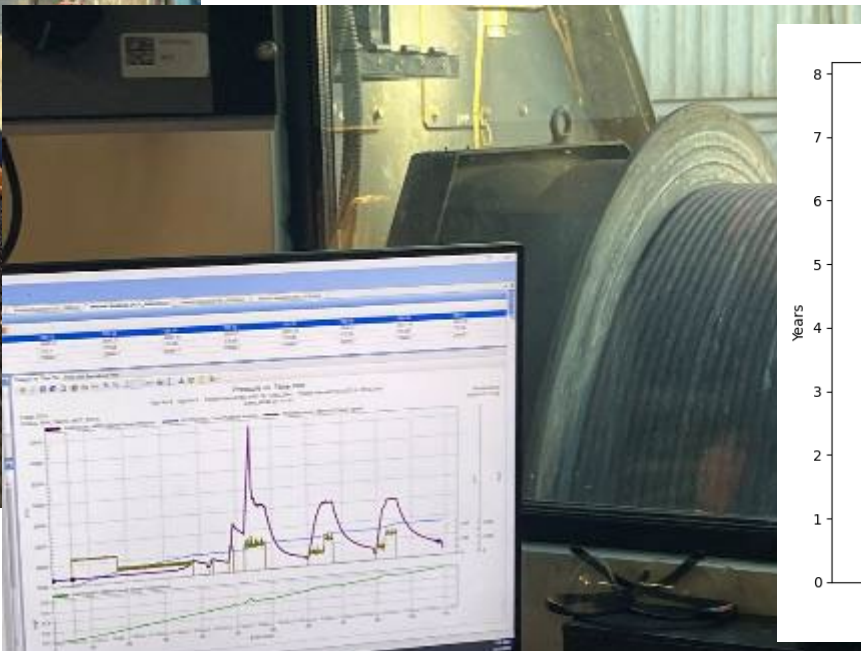
Data gathering



Models
optimised



Performed logs
& stress test at
Middenmeer



2 active survey
at Kwintsheul



COMMUNICATION

Outreach



Geo4all

Contact

EN

NL



Meerjarig innovatieprogramma Geo4all

Onder aanvoering van Geothermie Nederland, EBN en TNO werken 23 partijen in de aardwarmtesector gezamenlijk aan een breed innovatieprogramma Geo4all. De onderzoeksthema's moeten resultaten opleveren die gaan zorgen voor meer aardwarme winning en tegen lagere kosten, waarbij ook de maatschappelijke impact van duurzame fuik een belangrijke rol speelt.

Er is inmiddels 15 jaar aan praktijkervaring in de geothermiesector in Nederland. Daarin is al veel kennis opgedaan en informatie



4-7 NOVEMBER 2024
ROTTERDAM, THE NETHERLANDS

GEOTHERMAL ENERGY CONFERENCE

ZÜRICH, SWITZERLAND
8 - 10 OCTOBER 2025



Heterogeneous geomechanical properties and cooling in a sandstone reservoir exploited for geothermal production

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Keywords: geothermal, sandstone, geomechanics

ABSTRACT

In the Netherlands, geothermal projects target porous sandstone reservoirs and convert heat by balanced circulation. All projects need to provide a seismic hazard and risk analysis, part of which requires a

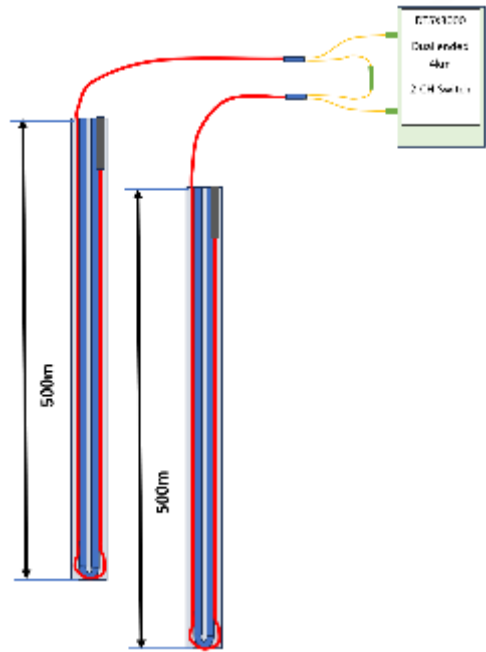
2020). As of 2024, there were 53 projects operational, producing an annual total of 7.5 PJ (MNP-AC, 2024). An integral and mandatory part of obtaining a license for geothermal exploitation in the Netherlands is an assessment of the seismic hazard and risk (SHRA) and the impact integrity (TNO-AGP & P&N, 2023). Part of the SHRA workflow consists of geomechanical simulations to determine the potential for fault

Unlocking low temperature geothermal reservoirs: Key insights for exploitation of geothermal energy from medium depths (500-1500 m)

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R11378
27 October 2025

tki nieuw gas
topsector energie

Website



Knowledge sharing

Site excursions

