

Overcoming Early Stage Risk

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'Making good progress, however we are not there yet'

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ebn

Energising the transition



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Introduction to EBN



Energie Beheer Nederland is a public energy company with 200+ employees

Our mission: *'Towards a sustainable energy system, faster, together'*

Our strategic pillars

- A sustainable gas system
- Responsible CO2 storage
- System Development for the public interest
- A sustainable heat transition



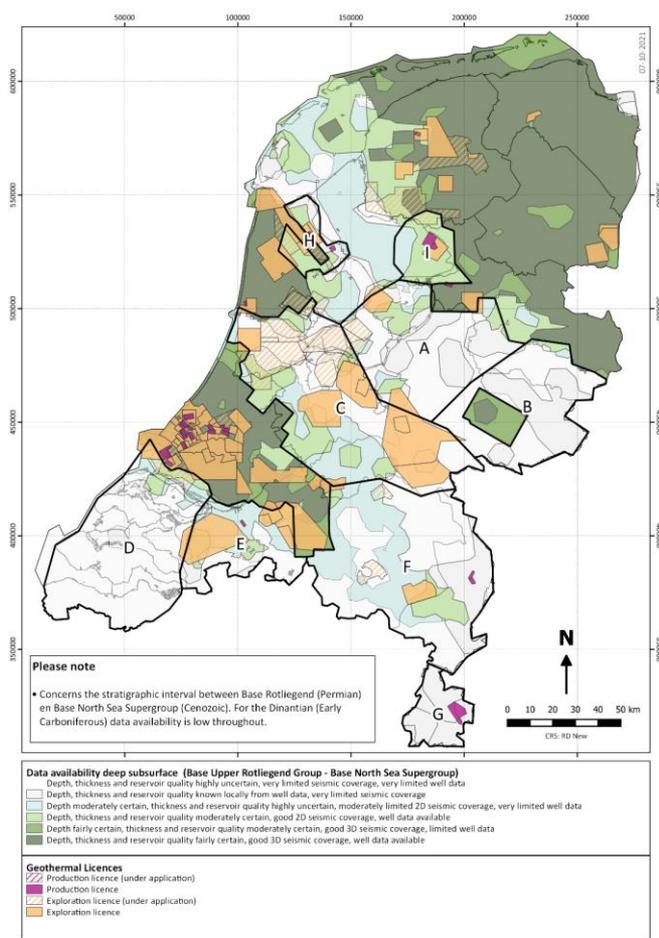
A sustainable **heat transition**

Implementing collective and sustainable heat systems

- Geothermal energy
- SCAN
- Heat systems
- Heat storage

SCAN program – rationale

- Many areas of the Dutch subsurface are underexplored – a hurdle for development of geothermal projects
- Initiative by EBN and TNO to acquire subsurface data to better understand potential
- Financed by the Dutch ministry of economic affairs and climate policy
- All data available for free, ready for use to better evaluate the opportunities for geothermal projects



SCAN focuses on the 'white spots'; on this map they're coloured white, grey and light green

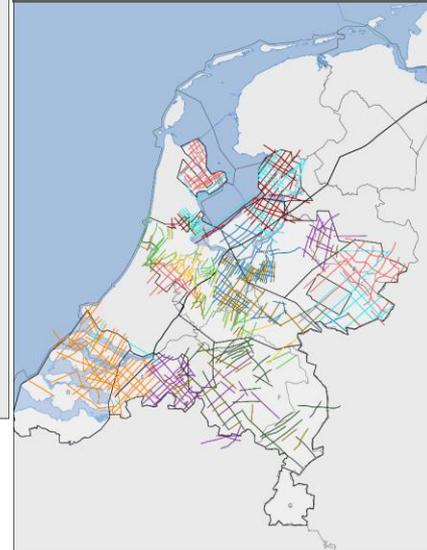
SCAN-program – details



The SCAN data program comprises:

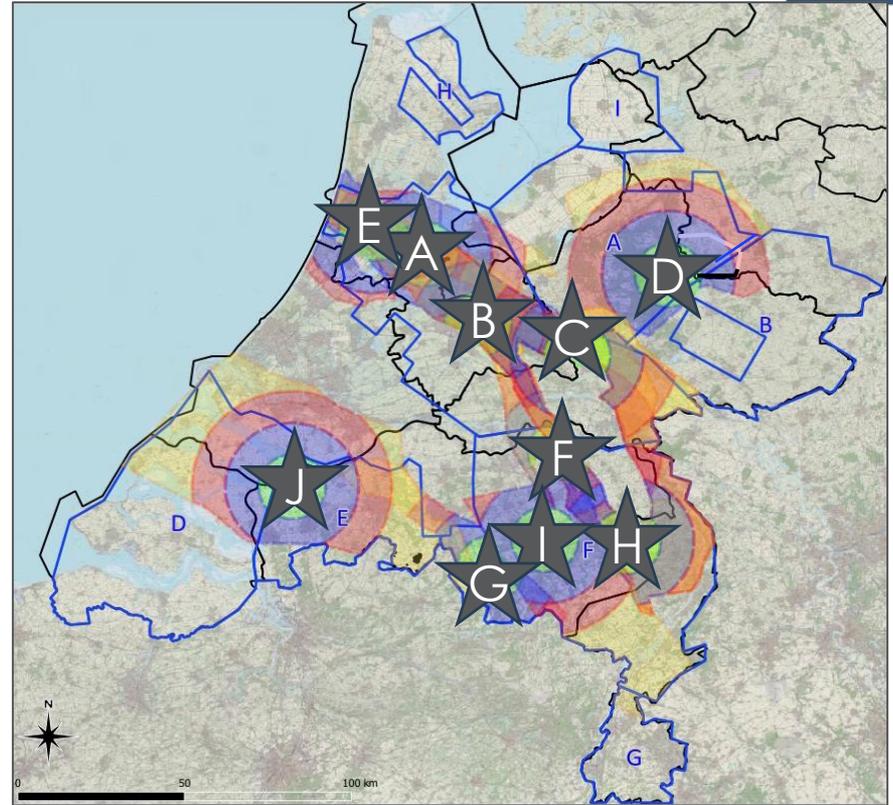
- Acquisition of new 2D seismic data (1950km)
- Reprocessing existing 2D seismic data (7500km, 451 lines)
- Drilling of 6-7 research wells, data acquisition only, no production (1st completed, 2nd started)
- Acquisition of additional 2D/3D seismic data in urban areas

All data available for free on NLOG website (<https://www.nlog.nl/scan>)



A Play-Based Exploration approach

- For selection of search areas, target intervals and well locations we applied a Play-Based Exploration workflow (van Lochem, 2020)
- Together, the play segments associated with the search areas have a wide area of influence
- Urban areas with high heat demand covered
- This resulted in total 10 search areas
- First research well completed and first data published; 2nd started.



Summary

- The SCAN program is providing a wealth of new and improved subsurface data
- A data well campaign commenced in October 2023 to focus on data acquisition of all potentially attractive geothermal reservoirs, expected completion by end 2025
- In general, well received and supported by stakeholders, landowners and neighbours
- All data is released for free and ready for use for further geothermal exploration and development.



The road ahead: ‘Making good progress, however we are not there yet’

- Development of geothermal projects still too slow
- Once the subsurface has been de-risked it is time to speed up drilling production wells
- Joint drilling campaigns is one of the options
- Considerable time needed for preparation
- Government to assign a coordinating party to organize skilled teams & contractors?

