

## OUTPUTS

De-risking DGE projects for enterprises by providing a DGE potential map with optimal geological information

Providing DGE for district heating at TRUDI and Balmatt pilot plants

Developing of a DGE Exploration Support Toolbox and economic and environmental evaluation support schemes

Improving production processes at pilot site Balmatt

Installing an improved heat pump system at TRUDI pilot site

Implementing a process to cascade energy at pilot sites TRUDI and Balmatt

Implementing a process to store thermal energy from DGE site TRUDI

Adapting thermal energy storage processes for demand and supply balancing

## RESULTS

In the pilots Balmatt (Belgium) and TRUDI (Bochum, Germany) production optimisation will gain a CO<sub>2</sub> reduction of 25,000 t/a.

By realising further plants in NWE this will reach up to 160,000 t/a until 2022. It is estimated that 10 years after the project's end, at least 1,600,000 t/a reduction will have been achieved. In the long term, it is expected to reach up to 7,000,000 t/a.

## PROJECT PARTNERS



## PROJECT SUB-PARTNERS



## MORE INFORMATION

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[www.nweurope.eu/DGE-Rollout](http://www.nweurope.eu/DGE-Rollout)

@DGE-ROLLOUT

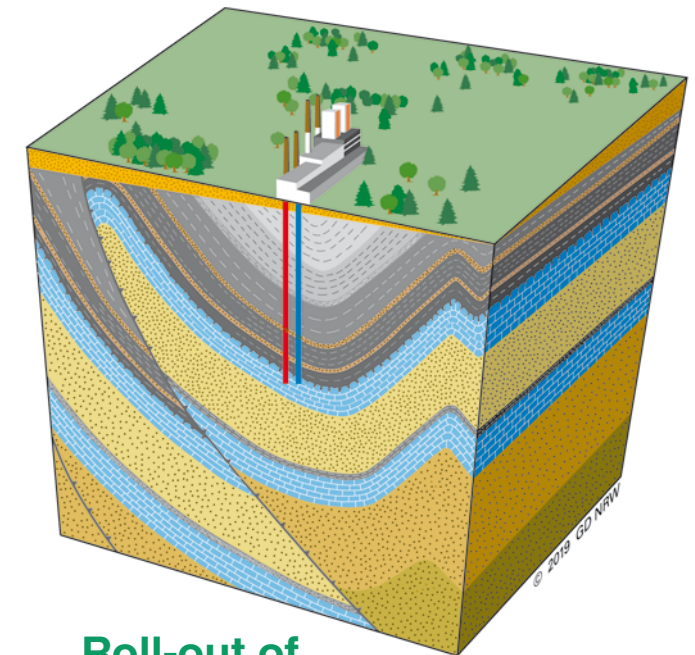
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## Roll-out of Deep Geothermal Energy in North-West Europe

## OUR VISION

The vision of our project is to foster the expansion of deep geothermal energy (DGE) as a climate and environmentally friendly energy resource in North-West Europe (NWE), and subsequently nurture the region's economics and the well-being of the citizens.

## OUR MISSION

DGE-ROLLOUT facilitates the use of deep geothermal energy as climate friendly energy resource to reduce CO<sub>2</sub> emissions and to protect the environment in North-West Europe.

## OUR KEY MESSAGES

DGE-ROLLOUT facilitates the use of natural and stored heat from the deep underground to reduce CO<sub>2</sub> emissions

DGE-ROLLOUT provides transparency of geothermal energy usage to the public

DGE-ROLLOUT supports new technologies for deep geothermal energy exploration and production

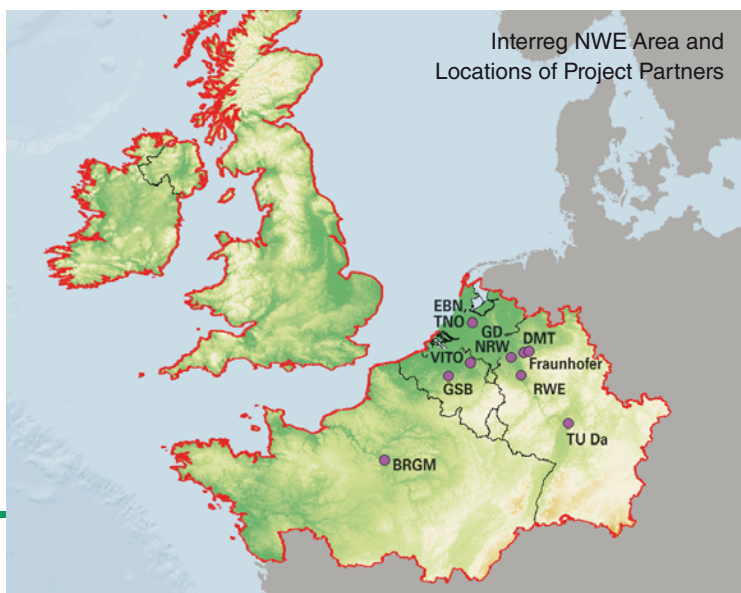
DGE-ROLLOUT provides information for stakeholders and investors of geothermal energy in North-West Europe

DGE-ROLLOUT explores and tests one of the most promising geothermal reservoirs in North-West Europe

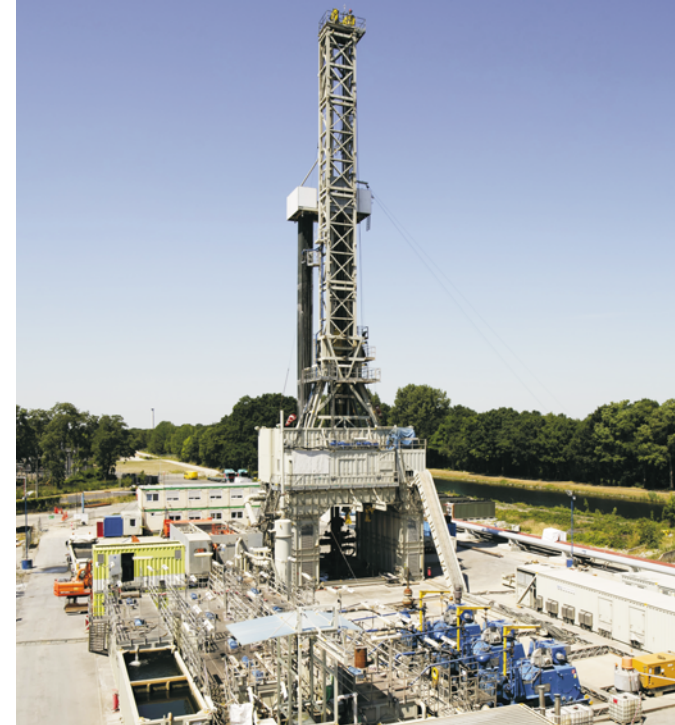
DGE-ROLLOUT provides exploration and engineering support for deep geothermal energy usage

## PROJECT PARTNERS

- Geological Survey of NRW (Lead Partner), Krefeld (DE)
- DMT GmbH & Co. KG, Essen (DE)
- EBN – Energie Beheer Nederland B.V., Utrecht (NL)
- RBINS-GSB – Royal Belgian Institute of Natural Sciences-Geological Survey of Belgium, Brussels (BE)
- Fraunhofer Institute for Energy Infrastructure and Geothermal Energy (IEG), Bochum (DE)
- RWE Power AG, Cologne (DE)
- TNO – The Netherlands Organisation for Applied Scientific Research, Utrecht (NL)
- TU Da – Technische Universität Darmstadt, Darmstadt (DE)
- VITO – Flemish Institute for Technological Research, Mol (BE)
- BRGM – French Geological Survey, Orléans (FR)



Deep Geothermal Energy Pilot Site Balmatt



## OBJECTIVE

It is our objective to produce energy and reduce CO<sub>2</sub> emissions by replacing fossil fuels through the increased usage of DGE in NWE for large-scale infrastructures requiring high temperature heat supplies to cover their basic energy loads.

## PILOTS

In two pilots Balmatt (Belgium) and TRUDI (Bochum, Germany) production optimisation will be tested by implementing high temperature heat pumps and new cascading schemes from high (> 100°C, big network) to low temperatures (> 50°C, single enterprise).