GTML

Geothermal projects

EEA Geothermal energy seminar

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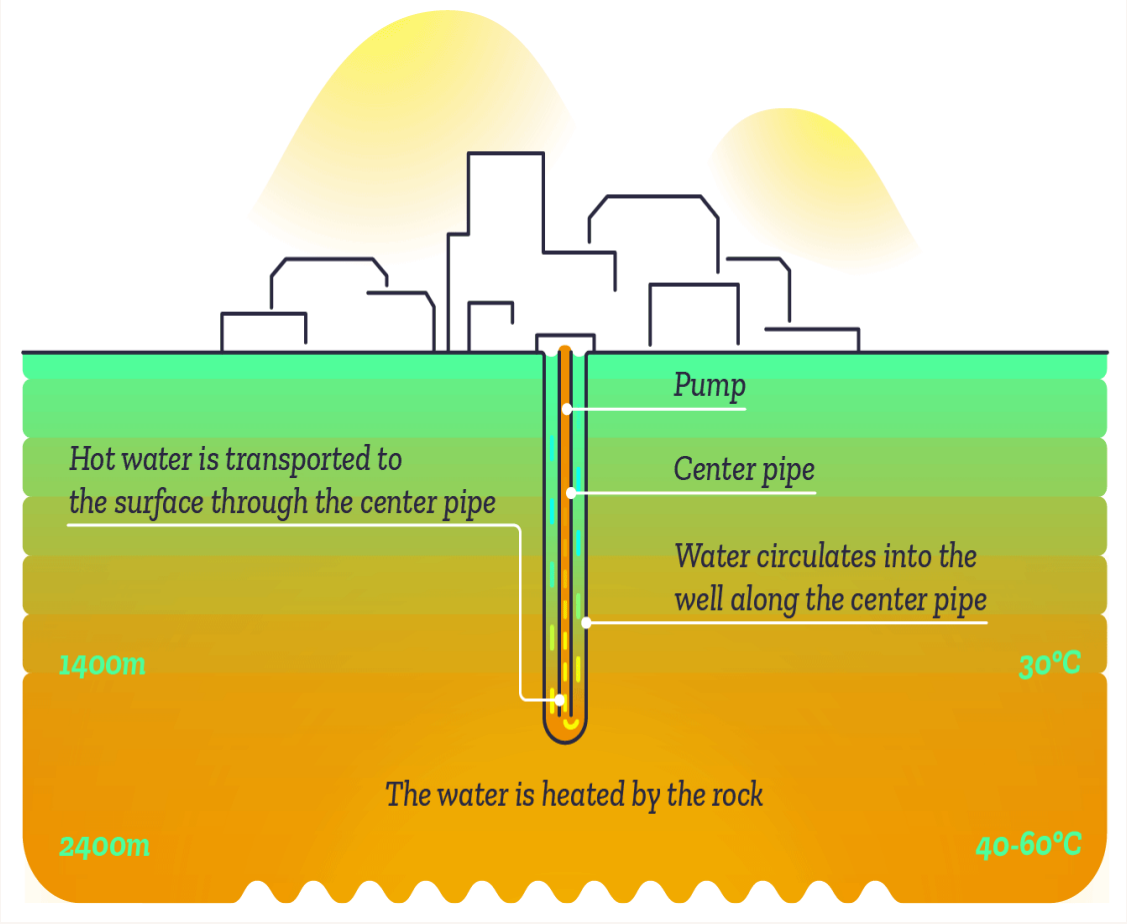
GTML - Knowledge is our strength

- A leading geothermal energy company in the Nordic
- We build, own and operate renewable energy systems based on deep energy wells
- The team have in-depth geothermal competence, associated network and understanding of energy systems
- Broad experience and competence from drilling in the oil and gas industry is directly applicable for geothermal heat extraction
- The team was instrumental for two important pilot projects:
  - Oslo Airport Gardermoen:
    Heat from two deep wells to 1500m for de-icing of the concrete pad at the engine test area
  - National Police Emergency Response Center:
    Four energy wells used for de-icing of helipads
- Fully financed by PE-fund Kerogen Capital Ltd (London/Hong Kong)

De-icing of engine test area at Oslo Airport

De-icing of helipads at National Police Emergency Response Center

GTML focus on 500 to 2000m energy wells



- Working in basement rocks and extracting the heat generated by the rock
- Energy production is adapted to the local geology and secured by in-depth engineering for well design and surface solution.
- Cooling can be offered if in combination with shallow wells.
- Proven technology of circulating hot water from the wells enables a long-lasting and renewable source of heat
- Alternative closed loops wells to 400-800 meters
- Fit-for-purpose drilling rigs
- Deep wells with optimal energy take-out and minimal surface occupation

Planning for renewable energy supply at Svalbard

- Deep geothermal energy in district heating in Longyearbyen in the planning phase

- Today's energy supply:
  - District heating and electricity from coal
  - Coal power plant to be closed in 2023/2024

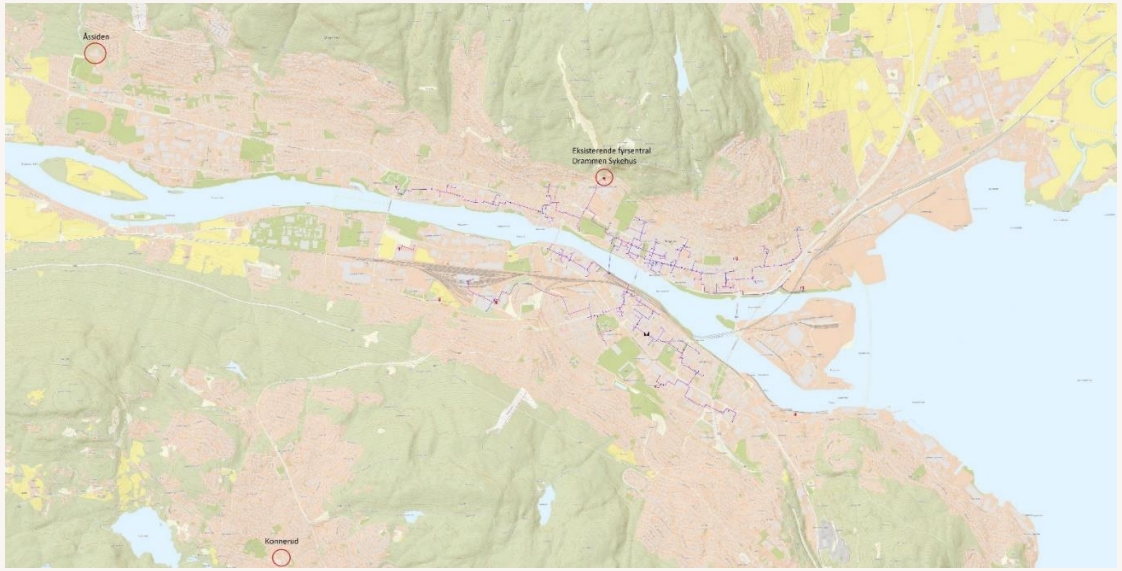
- Tomorrow's possible energy supply:
  - Heating from deep energy wells
  - Electricity from wind and solar combined with batteries

- Conceptual energy study completed 2022

- Deep energy wells as the main heat source to district heating system:
  - 0.85 MW pilot plant planned 2023/2024
  - 5.0 MW full scale systems estimated 2024/2025

District heating can be boosted by geothermal energy

- Drammen District Heating satellites - projects now in planning phase
- Conceptual energy study completed 2021
- Two satellite areas not connected to the existing district heating network and the old hospital area :
  - 1.2 MW Åssiden pilot: Heat to public schools
  - 4.0 MW Åssiden main: Heat to new residential area
  - 0.5 MW Konnerud: Heat to residential buildings
  - 5.0 MW Drammen old hospital: Transformed to residential
- Competitive compared to other energy sources



De-icing football courts is a large market

- Projects for six football club Viken County and Oslo city are now in the planning phase - transition from propane to geothermal
- Conceptual energy study to be completed May 2022
- Making football courts playable during the winter season
- From propane to geothermal heat:
  - Significant savings in energy pricing and service & maintenance
  - No CO_2 emissions
  - Public financial support on the investments
  - Three different concepts evaluated
- First wells planned H2 2022
- Strong interest from other football clubs

The solution is geothermal

- Geothermal energy has the potential to be an important contributor solving the current energy supply crisis and climate challenges
- The technology is proven
- Attention in the market-place is growing
- Focus from authorities and politicians will accelerate the development

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THANK YOU!