

Hillerød Energy Central HEC

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The Agreement

- Agreement with the hospital NHN signed in June 2019
- Delivery of 5,000 KW cooling (option for 6,000 KW later)
- Delivery of first cooling was planned for January 2021

Status

- First cooling expected early 2026
- Up to 100% cooling expected end of 2027

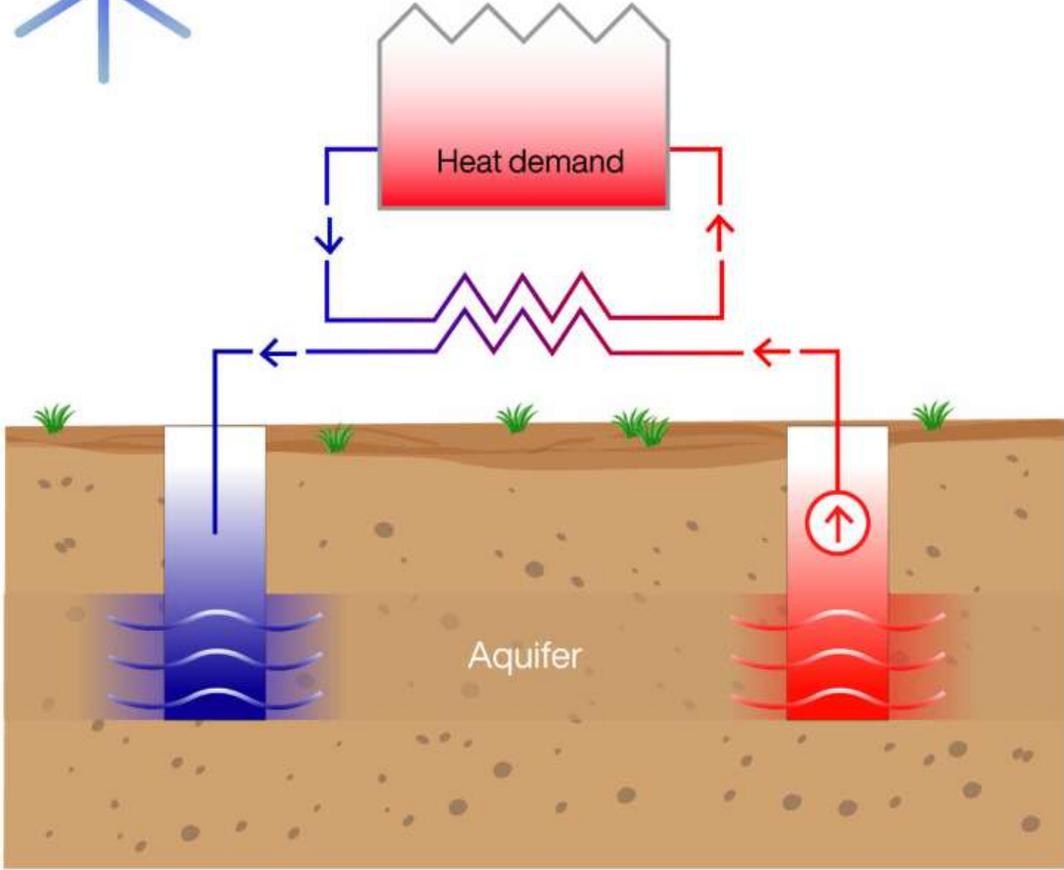
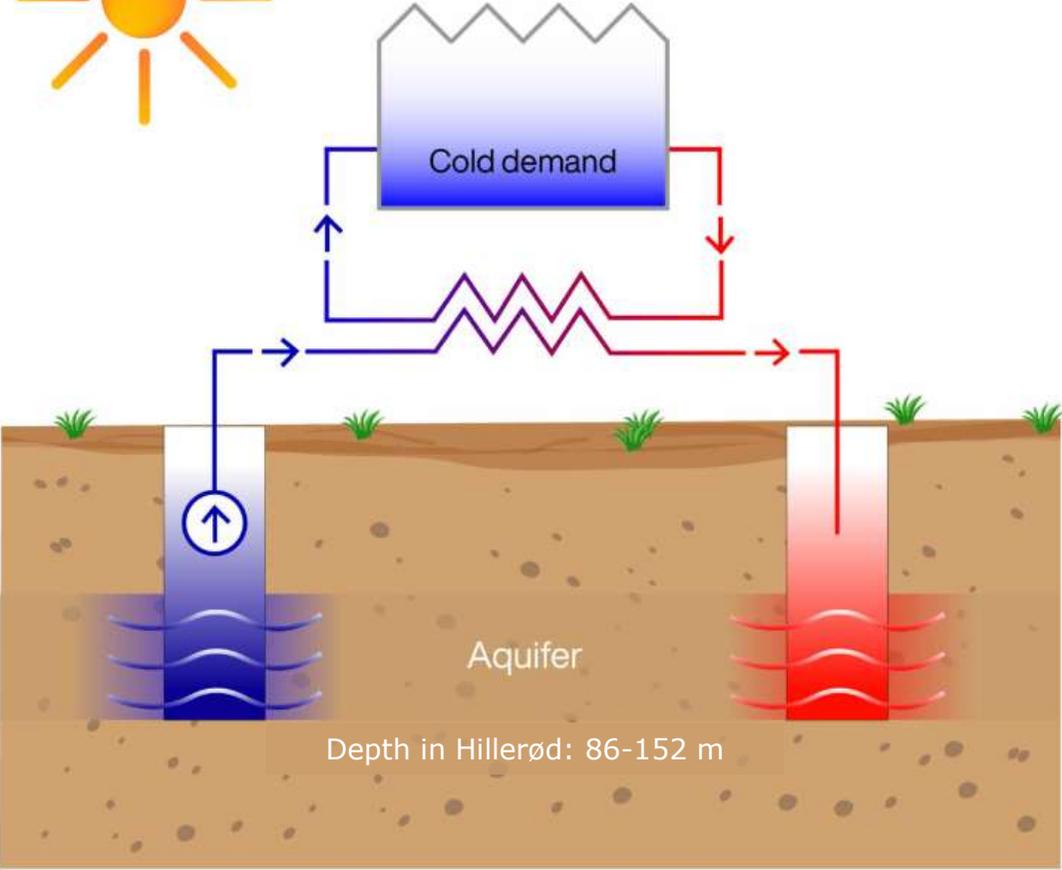


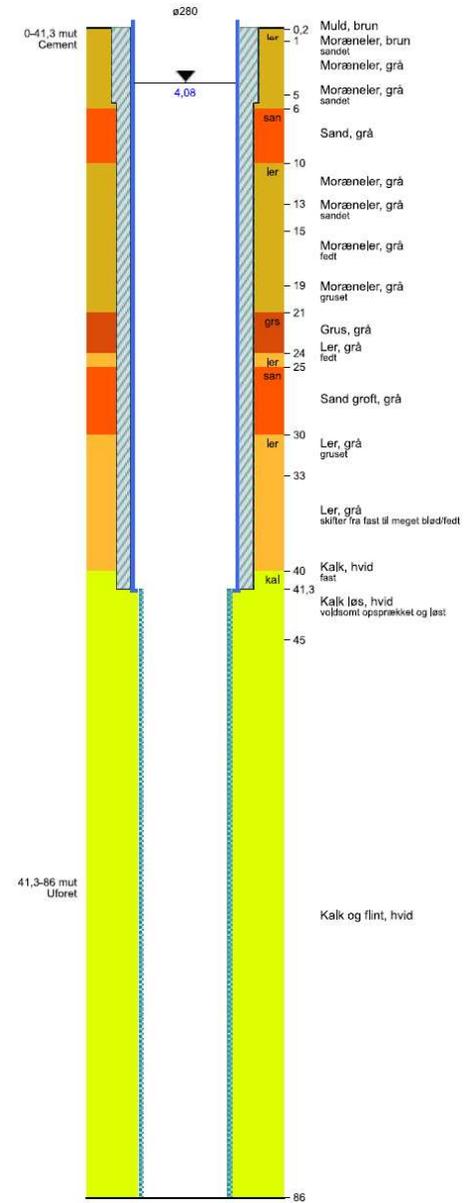
The Energy Central

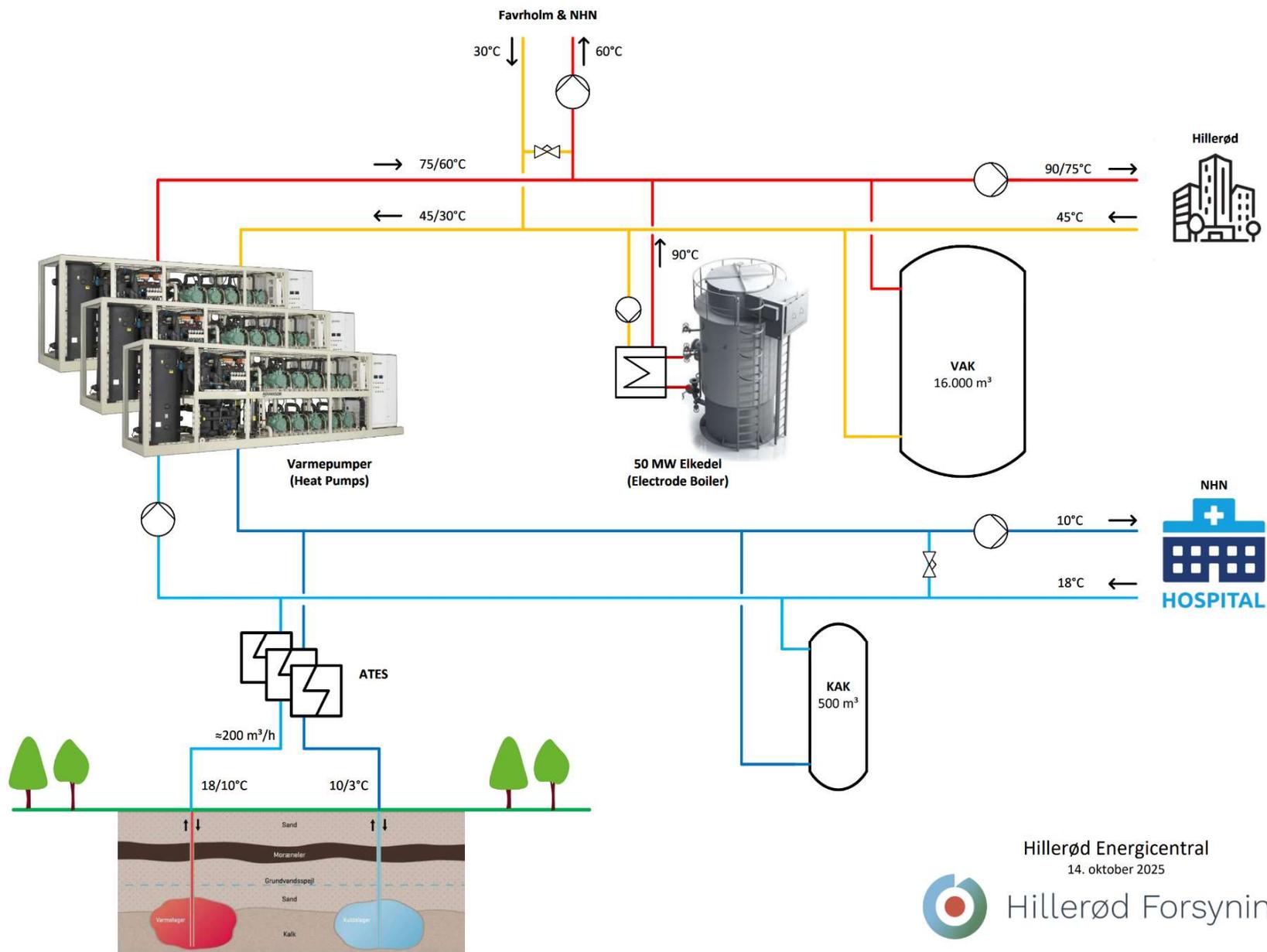
- Built in an existing building where an older combined cycle gas turbine plant has been decommissioned
- ATEs Heat Pumps.
 - *Aquifer thermal energy storage* (ATES) is the storage and recovery of thermal energy in underground aquifers (groundwater)
 - 3 CO₂-heat pumps with a total capacity of:
 - 4.000 KW Cooling
 - 6.000 KW Heating
- Cooling accumulation tank (KAK) of 500 m³
- 50 MW Electric boiler



Aquifer Thermal Energy Storage (ATES)







(Process diagram: Hillerød Energy Central)
Shows the flow between heat pumps, electric boiler, accumulation tank, Ates, and the hospital.

Suppliers

- Consultant
- Heat pump plant
- ATES plant
- Electric boiler (50 MW)
- Electrical systems (HV og LV)
- Plant protection



The Electric Boiler

The electric boiler produces heat (up to 50 MW) when electricity is cheap or as peak load

The electric boiler participates in network services to stabilize the main power grid

