

# Case Study

## Project: Using Geothermal in UK Healthcare

**Project Summary:**  
The use of Geothermal energy to reduce energy costs, increase sustainability and reduce carbon emissions across the NHS.



### > The Challenge

- > The NHS estate uses approximately £500 million worth of energy a year in England alone
- > Energy accounts for approximately 4 million tonnes of CO<sub>2</sub> - some 22% of the total carbon footprint for the NHS
- > Around 2.31 million tonnes of these CO<sub>2</sub> emissions can be attributed to electricity use whilst the remainder represents space and hot water heating via fuels such as gas, coal and oil
- > The requirement to reach an 80% reduction in emissions across the NHS between 2028 and 2032 (Source: Delivering a Net Zero NHS, 2020)
- > The challenge to close the gap to net zero despite considerable progress
- > The requirement to reduce emissions in the NHS estates across buildings and by replacing existing energy systems with renewable sources.

### > The Solution

- > Using Geothermal to decarbonize the NHS.
- > Utilising heat extracted from the ground to provide a clean 24/7 baseload energy that can provide a sustainable energy source for heating, cooling and power
- > The drilling of a minimum area and unobtrusive well with capacities of between 2-4 MW of thermal energy supplying renewable heat and cooling all year
- > The ability to meet heat demand with 4,400 - 8,800 MW every year with the flexibility to supply heat and cooling where energy required is more than 2,200 hours
- > Zero requirement for fuel or feedstock to produce heat, thereby ensuring resilience to energy price volatility
- > Resilience to increases in CO<sub>2</sub> taxes due to zero greenhouse gas emissions
- > Returns on CAPEX within only several years and the benefit of minimal/even zero energy costs.

### Why CeraPhi energy

- > The first and only company in the UK to offer a complete end to end geothermal energy solution from securing finance to full development and build or equity return
- > A pedigree in Geothermal energy with a trusted and respected team recognized for their work and project delivery in this sector
- > A company already underway on pilot projects across the UK
- > A company with a DNA founded on energy transition, advancing thermal energy, transitioning to a world using less petroleum and where Geothermal becomes a recognized source for near zero carbon power, heat and hot water.

**CeraPhi is a founding member of the Geothermal Energy Advancement Association.**

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