



COMPANY PROFILE AND CAPABILITIES

JULY 2025

Identifying, protecting and
developing our geothermal potential

Benefits of Geoheat

Harnessing geothermal and other locally available thermal energy for heating and cooling to:

- Reduce Overall Energy Usage
- Reduce Peak Loads
- Reduce Carbon Emissions
- Eliminate Direct Combustion of Gas
- Enhance Indoor Comfort
- Enhance Energy Productivity and Security
- Increase industrial heat pump efficiency
- Increase Design Flexibility and Aesthetics
- Increase System Resilience and Operation
- Future Proof for a Renewable Grid

These geoheat systems are utilised in your residence, educational institution, apartment block, aquatic centre, community or commercial building, and for low to medium heat industrial processes.



Who we are

GeoExchange NZ Limited is a multidisciplinary team of scientists, engineers and social scientists that provides independent design and advisory services to the public and private sector on geothermal heating (geoheat) systems.

Our core expertise lies in the design and implementation of ground-source heating and cooling systems (commonly known as geoheat), with a proven track record across a range of scales and sectors.

With a combined 70 years' experience, we are pioneers of this technology and, as such, have contributed to research and advocacy here in New Zealand and internationally – particularly in the context of the global energy transition.

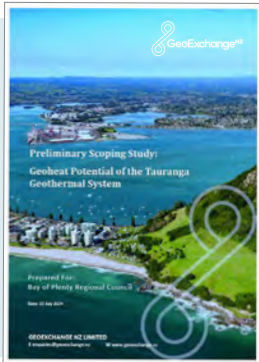
Our advantage lies in our unique capability to integrate the disciplines of mechanical engineering, environmental sciences, systems thinking, social sciences and some design philosophy. We are committed to delivering tailored, resilient systems that work in harmony with both the built and natural environments.

What we do

- Regional studies and advisory
- International and national commercial research
- Project feasibility
- Detailed design, documentation and site inspection
- Project management and installation
- Energy as a service model
- Resource management advisory
- Service and maintenance
- System audits



Our past performance



POTENTIAL OF TAURANGA GEOTHERMAL SYSTEM

Regional scoping study commissioned by Bay of Plenty Regional Council



HE PUNA TAIMOANA NEW BRIGHTON HOT POOLS, CHRISTCHURCH

Open loop ground source heat pump installation



REGIONAL ENERGY TRANSITION ACCELERATOR FOR THE BAY OF PLENTY

GeoExchange NZ provided the technical analysis for the geothermal workstream



TIPENE ST STEPHENS SCHOOL, SOUTH AUCKLAND

Horizontal ground loop heating system for swimming pool and communal dining hall



AUSTRALIAN WAR MEMORIAL, CANBERRA

The largest closed loop system in the Southern Hemisphere, set up as a district scheme to service multiple buildings



HAMMERSMITH AND FULHAM CIVIC CAMPUS, LONDON

A district system with an open-loop ground source heat pump as the main thermal energy source for the low-carbon heating and cooling system

Specialist strengths and capabilities

- We prioritise the sustainable use of geothermal resources, ensuring long-term viability and minimal environmental impact.
- Our joint expertise in hydrogeology, geology, geothermal and mechanical engineering allows us to tailor system designs to specific subsurface conditions, maximising efficiency and ensuring consistent, long-term performance.
- We take a holistic approach to system design, often uncovering elegant, integrated solutions that deliver unexpected cost savings for our clients.
- We stand behind our work by partnering with clients to finance systems with performance guarantees - demonstrating our confidence in the outcomes we deliver.

Awards and Grants

2025

- Researching Embodied Carbon of Geoheat Systems

Development of a methodology to assess embodied carbon implications of geoheat and other decarbonisation technologies as a successor to fossil fuel heating.
Funding from BRANZ in a collaboration with GNS Science and local industry

2024

- Decarbonising the Covered Crop Industry with Geoheat

Collaboration with GNS Science Co-funded by the Ministry for Primary Industries Sustainable Food, Fibre Futures Project, Vegetables NZ and Tomatoes NZ

- Test Thermal Performance of Geothermal Standing Column Well Technology

Collaboration with the Geological Survey of Northern Ireland.
Funded by Department for the Economy under the Energy Research Open Call, Northern Ireland

- Waste heat recovery and thermal sharing towards a Circular Economy

Collaboration with University of Wollongong and Bega Group.
Funded by the Land and Primary Industries Network Collaborative Projects Funding Program, NSW

2023

- Award - Sustainability in HVAC National AIRAH Awards

Canberra Grammar School Auditorium project won this national industry award for its contribution to sustainability

2022

- Deep Coaxial Borehole Heat Exchanger Research and Innovation Project

A project to develop numerical modelling software for the deep geothermal industry, Cornwall, UK. A collaboration with the Camborne School of Mines (University of Exeter) Funded by the European Regional Development Fund

2020

- GreenSCIES: A detailed design study for an integrated, smart, local energy system for a large District Energy Scheme in the London Borough of Islington.

Funded by Innovate UK, (part of UK Government's Research and Innovation Fund)

- Award - Sustainability in HVAC National AIRAH Awards

Plumbing Industry Climate Action Centre (PICAC) in Melbourne for our hybrid design that integrated energy piles with closed loop boreholes.

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