



Nonprofit Evaluation: **Project InnerSpace**

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Table of Contents

Table of Contents.....	1
Summary.....	2
What Is Project InnerSpace?.....	4
How Could Project InnerSpace Help Address Climate Change?.....	4
Key ideas: Project InnerSpace's strategy.....	4
Unlocking Geothermal's Potential for a Net-Zero Grid.....	5
Project InnerSpace's Strategies.....	6
Evidence of Project InnerSpace's Ability to Execute Its Activities.....	7
What Is Project InnerSpace's Theory of Change?.....	11
Examining the Assumptions Behind Project InnerSpace's Theory of Change.....	14
What Is Project InnerSpace's Cost-Effectiveness?.....	18
Is There Room for More Funding?.....	18
Budget and Fundraising Needs.....	18
Planned Uses of Additional Funding.....	18
Funders.....	18
DOE GEODE Award.....	19
Are There Major Co-Benefits or Potential Risks?.....	19
Key Uncertainties and Open Questions.....	20
Bottom Line and Next Steps.....	21

This is a non-partisan analysis (study or research) and is provided for educational purposes. Unless otherwise cited, information in this nonprofit evaluation comes from direct correspondence with Project InnerSpace.

Project InnerSpace is a 501(c)(3) tax-exempt organization in the United States.

As Giving Green is itself a charitable, tax-exempt organization, we are only offering an opinion on the charitable activities of Project InnerSpace's (c)(3) arm, and not on Project InnerSpace's (c)(4) entity.

Questions and comments are welcome at hello@givinggreen.earth.

Cover image: Project InnerSpace

Summary

- **What is Project InnerSpace?**

Project InnerSpace is a U.S.-based focused-research organization, a type of nonprofit that addresses coordination issues common in new markets. It aims to expand geothermal energy globally. Its core activities include GeoMap, which maps subsurface data to characterize geothermal resources, and the Geothermal Exploration Opportunities Fund (GeoFund), which supports community-based geothermal projects that may otherwise face a funding “valley of death.” It builds momentum for geothermal energy in the public and private sectors through convenings, policy research, and education. Financing geothermal projects is also part of Project InnerSpace’s theory of change.

- **How could Project InnerSpace help address climate change?**

Geothermal energy can reduce greenhouse gas emissions by providing carbon-free heat and electricity in place of fossil fuels. Geothermal is a source of clean firm power: it can generate electricity around the clock regardless of weather, making it a valuable complement to variable renewables on a decarbonizing grid. Conventional geothermal is limited to places with naturally occurring underground reservoirs. Next-generation (next-gen) geothermal technologies, which borrow drilling techniques from the oil and gas industry, can reach previously inaccessible areas. The timing is favorable: geothermal has drawn rare bipartisan support in the U.S., kept its federal tax credits under the 2025 One Big Beautiful Bill Act, and could help meet rising electricity demand from artificial intelligence. We believe Project InnerSpace can help fight climate change by speeding the rollout of next-gen geothermal.

- **What is Project InnerSpace’s theory of change?**

Project InnerSpace aims to accelerate the next-gen geothermal industry by connecting the pieces of its ecosystem. We think Project InnerSpace’s GeoMap and GeoFund can reduce financial risk for geothermal developers and boost deployment. Its broader promotion of geothermal can also make supportive policies more likely to pass, although this pathway is less proven. Together, we believe these effects can speed geothermal innovation, spread benefits globally, and accelerate emissions reductions.

- **Is there room for more funding?**

Project InnerSpace has a 2026 operating budget of about \$11.1 million USD and expects a similar 2027 budget, leaving a \$5 million fundraising target for 2027. It could use \$3 million to \$5 million in additional funding over the next 12 months for a 12-state research, ecosystem-building, and policy education campaign; AI-enabled improvements to GeoMap; and more GeoFund awards. Its 2027 plans include continuing work on standardized, open-source contracts and financial instruments to help institutional investors enter the geothermal market.

- **Are there major co-benefits or potential risks?**

A major co-benefit is job creation, especially for oil and gas workers who might otherwise oppose the energy transition. However, we think oil and gas industry involvement in geothermal expansion poses potential conflict-of-interest risks. Our strategy report [Unleashing Clean Energy in the U.S.](#) describes geothermal's co-benefits and potential risks more generally.

- **What are the key uncertainties and open questions?**

Funding Project InnerSpace is a "bet" that next-gen geothermal systems will be technically effective and cost-competitive enough to play a significant role in the global energy mix. Significant uncertainty remains about whether next-gen geothermal systems will succeed.

- **What is the bottom line, and what are the next steps?**

We recommend Project InnerSpace as a Top Climate Nonprofit based on its potential for high impact, its influence in the geothermal sector, and our assessment of its ability to execute. Its focus on quickly moving next-gen geothermal technologies down a learning curve also complements that of [Clean Air Task Force](#), another Top Climate Nonprofit, whose geothermal work focuses on superhot rock geothermal energy.

Donors can support its work by donating to the [Giving Green Fund](#) or directly to [Project InnerSpace](#).

What Is Project InnerSpace?

Founded in 2022, [Project InnerSpace](#) is a U.S.-based focused-research organization, a type of nonprofit that addresses coordination issues that often arise in new markets.¹ **Its mission is to expand geothermal energy globally by filling research gaps and connecting parts of the geothermal ecosystem that would otherwise remain unlinked.** Its work is global in scope and often carried out with in-country partners. Its core activities include [GeoMap](#), which maps geothermal resources, and the Geothermal Exploration Opportunities Fund (GeoFund), which bridges funding gaps for community-based geothermal projects. Project InnerSpace also builds momentum for geothermal energy by hosting events, connecting stakeholders across the public and private sectors, and publishing reports on geothermal energy opportunities worldwide.

Project InnerSpace operates alongside affiliated entities. Its 501(c)(3) conducts the activities described above. In 2026, it launched a 501(c)(4), [InnerSpace Action](#), which conducts advocacy, and established [Abundance Energy Group](#), a public benefit corporation that will fund first-of-a-kind (FOAK) geothermal projects. We evaluate only the 501(c)(3)'s activities.

How Could Project InnerSpace Help Address Climate Change?

Key ideas: Project InnerSpace's strategy

- **Geothermal as clean firm power for a net-zero grid:** Geothermal energy offers constant, carbon-free electricity, making it a critical complement to wind and solar in a reliable zero-emissions grid.
- **Next-generation geothermal technologies offer global potential:** Technologies such as enhanced geothermal systems, which draw on deep-drilling techniques from oil and gas extraction, can access geothermal resources in new areas and greatly expand geothermal's reach.
- **Project InnerSpace drives geothermal deployment:** It supports next-generation geothermal through GeoMap and GeoFund. It also builds public, private, and government support through events, state- and region-specific roadmaps, and policy research and education. We believe

¹ "Project InnerSpace (InnerSpace), a multi-phase initiative focused on accelerating global geothermal prospecting and development has launched." [ThinkGeoEnergy, 2022](#)
FROs: "Focused Research Organizations ("FROs") are a type of non-profit organization that aim to address coordination gaps that often arise in emerging areas of research." [Project InnerSpace, 2025](#)

this can attract investment and reduce barriers to commercialization and deployment.

Unlocking Geothermal's Potential for a Net-Zero Grid

Geothermal energy can help address climate change by providing carbon-free heat and electricity in place of fossil fuels. It is a source of clean firm power, meaning it can generate electricity at any time, regardless of weather conditions. Clean firm power keeps the grid reliable during long periods of low output from variable renewable energy (VRE) sources such as solar and wind. We view clean firm power and VRE as complementary and think both are essential to a zero-emissions grid.

We think an energy portfolio that includes clean firm power offers a more feasible path to net-zero emissions than intermittent renewables alone.² Several net-zero models suggest the U.S. must quadruple clean firm power, adding 700-900 gigawatts (GW) by 2050, to support renewables and rising electricity demand.³ We also think geothermal could help meet the projected increase in electricity demand from the artificial intelligence (AI) industry and has uses beyond electricity generation (e.g., carbon-free heat to decarbonize heavy industry).⁴

Clean firm power has kept its momentum despite uncertainty around U.S. federal climate policy under the Trump administration. Although the 2025 One Big Beautiful Bill Act sharply curtailed tax credits for wind and solar, it largely preserved them for firm technologies such as geothermal and nuclear, which can still claim the full credit if construction begins by 2033.⁵ Geothermal has drawn rare bipartisan support and

² In general, we believe the U.S. needs more clean, firm capacity to reach net-zero. "System level decarbonization modeling, regardless of renewables deployment, suggests that the U.S. would need significantly more clean, firm capacity to reach net-zero (Figure 3)." [U.S. Department of Energy \(DOE\), 2023](#)

³ "System-level decarbonization modeling suggests that the U.S. will need to quadruple the existing clean firm power supply available on the grid today, adding between 700 and 900 GW by 2050 to build a decarbonized, functioning grid system capable of supporting wind and solar buildout and increased demand." [DOE, 2025](#)

⁴ Demand for electricity: "Military bases and data centers offer one particular benefit for the geothermal industry as it seeks to get its legs under it: They are facilities that are willing to pay a premium for power that is both clean and always on, even if it is substantially more expensive than more intermittent sources like wind or solar." [The Hill, 2024](#).

Decarbonizing heavy industry: "Instead of using combustion to convert chemical energy in a zero-carbon fuel to heat, zero-carbon heat can also be harvested directly from environmental sources, like solar radiation and geothermal energy." [Thiel & Stark, 2021](#)

⁵ Wind and solar rollbacks and nuclear credit: "The other big roll backs were to the wind and solar tax credits. The OBBB terminates the section 45Y production tax credit (PTC) and section 48E investment tax credit (ITC) for wind and solar projects placed in service after December 31, 2027, though facilities that begin construction before July 4, 2026, may take the full amount of the credit for the original phase-out period... The few exceptions to the general roll back were the section

favorable treatment from the administration, although it remains unclear whether that support will last.⁶

New geothermal technologies that borrow techniques from the oil and gas (O&G) industry could unlock energy in places that were previously out of reach.⁷ These next-generation (next-gen) geothermal technologies are less mature than conventional geothermal but are reservoir-independent. For example, enhanced geothermal systems (EGS) use hydraulic fracturing to inject water deep underground, creating artificial reservoirs rather than relying on natural ones. Next-gen technologies such as EGS and advanced geothermal systems could be especially promising for expanding geothermal globally.

For more on Giving Green's approach to commercializing and deploying clean firm power, see our strategy report on [Unleashing Clean Energy in the U.S.](#)

Project InnerSpace's Strategies

Project InnerSpace aims to help next-gen geothermal technologies reach commercial scale by reducing financial risks and building momentum for the sector. We think its efforts accelerate learning-by-doing and drive down costs faster than the counterfactual. Its current work falls into three areas:

- **GeoMap:** a publicly available, global map of geothermal resources intended to reduce early exploration risk and attract investment.
- **GeoFund:** low- or no-interest loans for community-based geothermal pilot projects that may struggle to secure traditional financing.
- **Building momentum:** funding research, advising funders, hosting events, making the case for geothermal in specific states and regions, conducting policy research and education, and generating support for geothermal.

We describe each activity below, along with the evidence on Project InnerSpace's ability to execute it.

45Z clean fuel credit, the section 45Q carbon sequestration credit, the section 45X advanced manufacturing PTC (for non-wind components), and the section 45U nuclear credit." [Steptoe, 2025](#)

Geothermal: "Drilling equipment rises against a cloudy sky Geothermal startup Fervo Energy drills deep into the ground in Beaver County, Utah. (Fervo Energy) Geothermal energy was spared in President Donald Trump's sweeping tax and spending law, which made deep cuts to incentives for other forms of clean energy." [Canary Media, 2025](#)

⁶ "One additional energy source has more quietly but steadily moved during the 2020s from the periphery toward center stage in federal and state energy policy deliberations, bolstered by unusually broad bipartisan support and poised for significant expansion." [Brookings Institute, 2026](#)

⁷ "Advances in technology are opening new horizons for geothermal, promising to make it an attractive option for countries and companies all around the world. These techniques include horizontal drilling and hydraulic fracturing honed through oil and gas developments in North America." [International Energy Agency \(IEA\), 2025](#)

Evidence of Project InnerSpace's Ability to Execute Its Activities

GeoMap: Mapping Next-Gen Geothermal's Global Potential

GeoMap is a [publicly available map](#) that shares global subsurface data, such as heat depth and rock types, to characterize geothermal resources.⁸ It includes modules such as its [Surface & Subsurface Modules](#) and [Techno-Economic Sensitivity Tool](#), which estimates potential costs and emissions reductions. Project InnerSpace built the map by collating and digitizing existing subsurface data from sources such as O&G companies and geological surveys. Where there is no O&G drilling, it extrapolates from known geological features and local water well data, using AI trained on O&G well data to predict geothermal suitability. As of October 2026, GeoMap covers every region of the world, and Project InnerSpace plans to add new AI features. By showing next-gen geothermal's global potential, GeoMap could accelerate deployment by reducing early exploration risk and attracting investment.

Overall, we have a positive impression of Project InnerSpace's ability to make the connections GeoMap requires, including finding data, recruiting talent, and communicating its findings. We are optimistic about its ability to connect GeoMap with users because numerous researchers and funders we interviewed described it as a highly engaged convener of research universities and geothermal and O&G companies. We think it is especially promising that Project InnerSpace leads the [Geothermal Energy from Oil and Gas Demonstrated Engineering](#) (GEODE) consortium, which connects geothermal and O&G experts.⁹ We think these experts can bring valuable knowledge to geothermal expansion and create synergies with GeoMap.

According to Project InnerSpace, around 5,500 entities across academia, industry, finance, government, and media engage with the platform (**Figure 1**).¹⁰ It also reports that 95 academic publications, international reports, and other scientific works have incorporated GeoMap science.¹¹

⁸ "Phase 1 of Project InnerSpace will produce high-resolution geothermal prospecting maps to provide information about the quality and depth of geothermal resources uses AI trained on oil and gas well data to predict geothermal within a 100 kilometer radius of the world's population centers, serving as a project development and prospecting model of accelerated development of geothermal resources." [Project InnerSpace, 2022](#)

⁹ "On September 10, 2024, an exciting collaboration kicked off to expand geothermal energy deployment and shape the nation's future energy landscape. The Geothermal Technologies Office's (GTO) GEODE initiative, short for Geothermal Energy from Oil and Gas Demonstrated Engineering, will leverage the expertise and experience of the oil and gas sector to boost geothermal energy nationwide. Backed by \$10 million from GTO, the project's phase will lay the groundwork for a comprehensive roadmap to unlock geothermal energy's potential. Led by Project InnerSpace, GEODE is convening experts from both industries to leverage oil and gas industry know-how for geothermal innovation and identify areas for future GEODE research, pending appropriations." [DOE, 2024](#)

¹⁰ See "GeoMap by the Numbers" and "Who Uses GeoMap?" [Project InnerSpace, 2025](#)

¹¹ See "GeoMap by the Numbers" [Project InnerSpace, 2025](#)

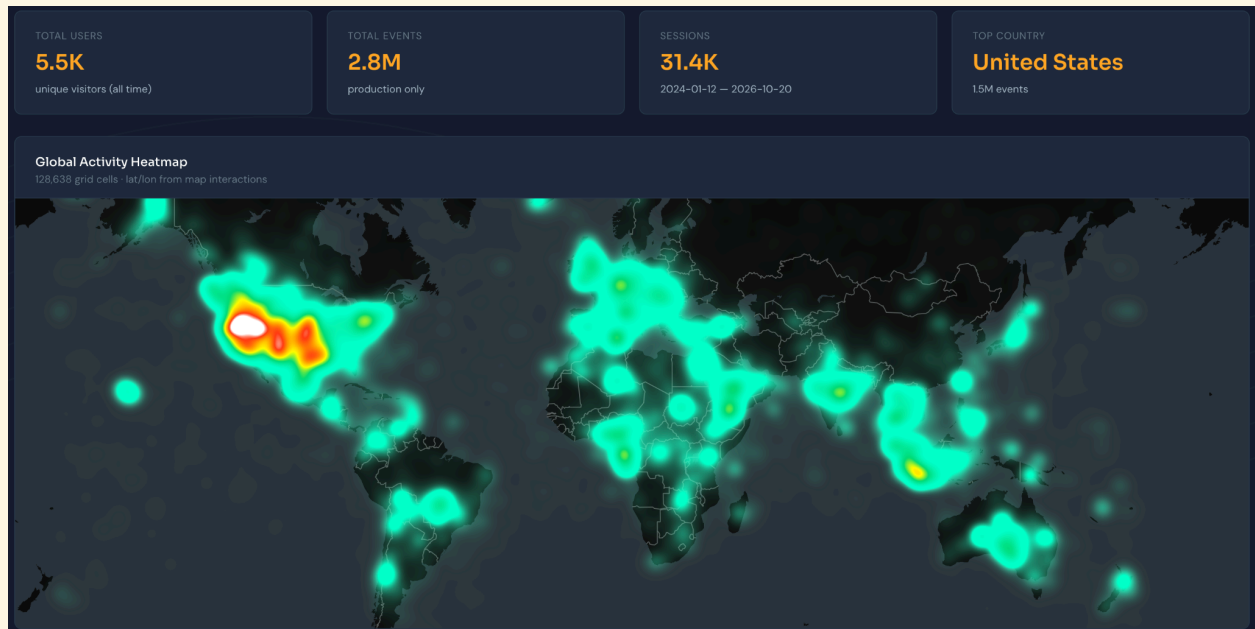


Figure 1: GeoMap user queries by location and sector

GeoMap appears useful to developers for early-stage screening. For example, Project InnerSpace shared this testimonial from Sage Geosystems, a next-gen geothermal start-up:

Sage Geosystems uses Project InnerSpace's GeoMap tool to rapidly derisk prospectivity for geothermal resources in terms of heat, presence of faults, regional stress states, and lithologies at targeted depths.

GeoMap also provides valuable information on power grids and power plant infrastructure, which is otherwise difficult to find for numerous countries that lack digital databases for this type of infrastructure.

The testimonial is indicative that GeoMap is useful for early-stage screening, such as deciding which regions merit further exploration. We do not think GeoMap replaces site-specific exploration, because it may be too coarse to show exactly where to build. We also note that Project InnerSpace selected this testimonial, so it may not represent all users' experiences.

Beyond helping developers screen regions, GeoMap can point to promising early customers. Its North America module has identified U.S. sites with geothermal potential.¹² We think some could be easy wins, such as military bases and data centers willing to pay

¹² "The GeoMap data shows that virtually every military base in the West, and most of those in Texas, sits atop geothermal resources suitable to generate electric power — a fact that has not been lost on the Department of Defense, which is funding pilot projects at six military bases across the West." [The Hill, 2024](#)

a premium for firm power.¹³ The U.S. Department of Defense (DOD) has expressed interest in building its installations' energy resilience, and as of August 2025, 12 DOD installations had involved geothermal stakeholders.¹⁴ This development suggests demand exists for the kinds of sites GeoMap identifies.

GeoFund: Financing Community-Based Geothermal Projects

Project InnerSpace launched GeoFund in 2025 to support community-based geothermal pilot projects in low- and middle-income countries (LMICs) that may struggle to secure traditional financing. GeoFund derisks projects and catalyzes future funding through low- or no-interest loans. GeoFund's first project, funded in 2025, was a cold storage and fruit dehydration facility in Tapri, India.¹⁵ The Tapri facility is on schedule to begin commercial operations in late 2026 or early 2027. In 2026, GeoFund's pipeline includes a thermal-energy supply project in diligence, a feasibility study with a research partner following a signed memorandum of understanding, and further pilots under review.

GeoFund's 2026 progress was slower than we expected. Project InnerSpace projected six to 10 pilots for 2026 and will very likely miss this target. The team found that funding new projects in LMICs was more complex than anticipated, with challenges in diligence, permitting, and co-funding approval. In response, Project InnerSpace now supports feasibility studies for projects too early to accept derisking funds and works through in-country partners to identify new projects. We think these changes are reasonable, and we still expect GeoFund to succeed over time because the community-based projects GeoFund supports largely face financing, not technical, barriers.

Project InnerSpace did not design GeoFund to fund FOAK next-gen geothermal projects, which carry more technical risk. Project InnerSpace plans to address this gap through GeoForce, a multi-stage investment vehicle led by its public benefit corporation, Abundance Energy Group. GeoForce is designed to bring institutional capital to geothermal projects from exploration through development. According to Project InnerSpace, it will launch in early 2027, with its first five funded projects announced. We think early-stage financing for FOAK projects is critical to commercializing next-gen geothermal. Because GeoForce has not yet launched and sits outside of Project InnerSpace's 501(c)(3) activities, we have not evaluated it.

¹³ "Military bases and data centers offer one particular benefit for the geothermal industry as it seeks to get its legs under it: They are facilities that are willing to pay a premium for power that is both clean and always on, even if it is substantially more expensive than more intermittent sources like wind or solar." [The Hill, 2024](#)

¹⁴ "The initiative has involved stakeholders across more than twelve DOD installations from all the DOD services and in six U.S. states." [U.S. Department of Defense \(DOD\), 2025](#)

¹⁵ "GeoFund's first funded project in Tapri India... The new cold storage facility will provide 500 tons of storage and fruit dehydration capacity, allowing farmers to preserve quality, cut waste, and sell at premium prices." [PR Newswire, 2025](#)

Building Momentum for Next-Gen Geothermal Energy in the Public and Private Sectors

Project InnerSpace helps generate interest in next-gen geothermal on several fronts. Overall, we have a positive impression of its ability to build momentum in the public and private sectors.

- **Funding research and catalyzing new players:** Since its founding, Project InnerSpace has invested \$16.6 million USD in research, supporting 300 organizations worldwide.¹⁶ For example, its seed grant to HEET (Home Energy Efficiency Team)—a nonprofit focused on an ethical and efficient thermal energy transition—helped HEET raise additional funds from the U.S. Department of Energy (DOE).¹⁷ We think this example shows Project InnerSpace can use relatively small grants to bring new organizations and funding into the field.
- **Advising funders and addressing financing barriers:** In 2025, Project InnerSpace advised three groups of funders interested in derisking FOAK geothermal projects, including as technical advisor to a \$100 million fund.¹⁸ We think this role lets Project InnerSpace influence capital well beyond its own budget.
- **Hosting large-scale events:** Project InnerSpace's Geothermal House events have reached more than 4,000 participants across political lines and received major media coverage.¹⁹ In 2025, one next-gen geothermal company told us that Geothermal House helped it facilitate at least three investment deals, and several others have credited Project InnerSpace for its support.²⁰ We see this as promising evidence of Project InnerSpace's role as an ecosystem builder.
- **Building state- and region-specific cases for next-gen geothermal:** Project InnerSpace's *Future of Geothermal* report series began in Texas and has since expanded.²¹ In 2025, it published reports on Pennsylvania and New Mexico, and

¹⁶ See "InnerSpace Overview" and "InnerSpace's Global Reach." [Project InnerSpace, 2025](#)

¹⁷ "An example of this follow on effect from a seed grant is our support of HEET, who after completing a successful scope of work under a seed grant from InnerSpace went on to raise additional funds from the U.S. Department of Energy, and eventually supported the completion of a pilot project in Massachusetts." [Project InnerSpace, 2025](#)

¹⁸ "Over the past year, InnerSpace has advised three distinct groups of funders who were interested in helping to de-risk first-of-a-kind geothermal pilots... In one recent example, we served as technical advisor to a \$100M fund, including providing assistance with the Theory of Change and impact statements for the fund, making recommendations with regard to project pipeline and project diligence, interviewing manager candidates for the prospective fund, and providing technical recommendations on the competencies of manager candidates based on their application and interview materials." [Project InnerSpace, 2025](#)

Project InnerSpace supported EIG with its investment vehicle. For more information on EIG's geothermal fund, please see [EIG, 2026](#)

¹⁹ As an example, see [New York Times, 2026](#) for mention of Geothermal House.

²⁰ Startups include Sage Geosystems, Bedrock Energy, and Hephae Energy. See pages 41-44 of [Project InnerSpace, 2025](#)

²¹ Jamie Beard and Bryant Jones from Project InnerSpace are listed as lead authors of *The Future of Geothermal in Texas*. [University of Texas, Austin, 2023](#)

added global reports on India, Indonesia, and the U.K. Through the DOE-funded GEODE consortium, it also completed six U.S. state geothermal roadmaps (Idaho, Oregon, Alaska, Oklahoma, Louisiana, and Arizona). We think Project InnerSpace has been productive and strategic in choosing where to focus, prioritizing places with strong geothermal potential, existing O&G expertise, or fast-growing energy demand. We also think these reports give policymakers and advocates a locally tailored starting point for supportive policy. Project InnerSpace's 501(c)(3) entity works on research and produces policy recommendations, while its 501(c)(4) entity [InnerSpace Action](#) (launched in 2026) pursues legislation.

- **Conducting policy research and education:** In 2025, Project InnerSpace partnered with the International Energy Agency (IEA) and the Rhodium Group to show geothermal's potential to [meet global electricity demand](#) and [power U.S. data centers](#), respectively. It also worked with the Carnegie Endowment for International Peace to outline pathways to [scaling next-gen geothermal internationally](#). We think partnering with well-known institutions lends credibility to its findings and helps it reach audiences that might not otherwise engage with a geothermal-focused nonprofit.
- **Generating support for geothermal:** Numerous geothermal stakeholders told us that Project InnerSpace has played an important role in building enthusiasm for geothermal energy, and it has received mentions and profiles in major media outlets over the years.²² We think this visibility strengthens its other work by helping it convene stakeholders, attract funders, and keep geothermal on policymakers' radar.
- **Developing standards to unlock financing:** In 2026, Project InnerSpace and the Society of Petroleum Engineers (SPE) led a coalition of industry experts to develop the Geothermal Resources Management System (GRMS), a standardized framework for classifying geothermal resources and reserves, modeled on the petroleum industry's widely used system. Project InnerSpace funded GRMS' publication, so it is freely accessible, and a second phase in 2027 will promote its use among financial institutions.²³ We think GRMS could lower financing barriers by giving lenders and insurers a familiar way to assess projects. However, it is too early to know whether it will be widely adopted.

What Is Project InnerSpace's Theory of Change?

According to Project InnerSpace, it aims to accelerate the next-gen geothermal industry by removing the major barriers to exponential growth and development in the field.²⁴ Our

²² Examples include [New York Times, 2023](#), [Wired, 2023](#), [National Public Radio, 2022](#), and [PBS, 2026](#).

²³ For more information, see Project InnerSpace's GRMS announcement, [Project InnerSpace, 2026](#)

²⁴ In its own words, Project InnerSpace's theory of change is as follows: "InnerSpace has identified seven major barriers that stand in the way of massive growth of next-gen geothermal energy - all

theory of change is narrower than Project InnerSpace's own. We cover only the 501(c)(3)'s established activities, not its recently launched programs (e.g., GRMS) or programs it plans to launch or expand. On this basis, we think Project InnerSpace's GeoMap and GeoFund can lower financial risks for companies and boost geothermal deployment relative to the counterfactual (**Figure 2**). We also think its broader promotion of geothermal energy can make supportive policies more likely to pass. Together, we think these inputs can speed geothermal energy innovation, enhance global spillover effects, and accelerate emissions reductions relative to the counterfactual. Below, we examine the main assumptions behind this theory of change.

complex multi-disciplinary challenges that, if solved would create discipline specific watershed moments across the global geothermal landscape in areas like geoscience, finance, and innovation. If we are successful in achieving our mission, the resulting seven step changes combined would result in the fast creation of a global, exponentially growing geothermal industry."

Theory of Change: Project InnerSpace

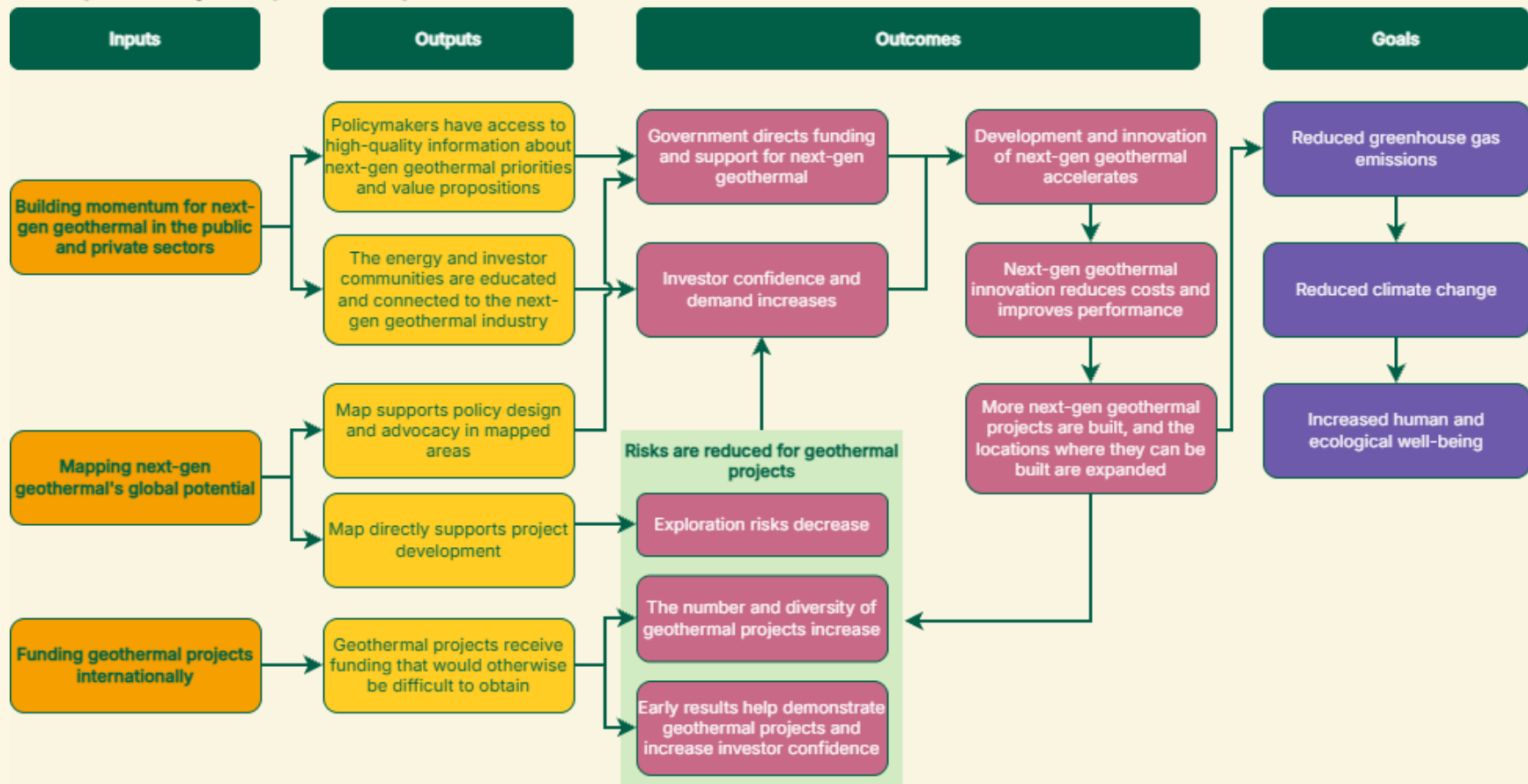


Figure 2: Giving Green's theory of change for Project InnerSpace

Examining the Assumptions Behind Project InnerSpace's Theory of Change

Below, we evaluate the main assumptions behind our understanding of Project InnerSpace's theory of change and rate our certainty in each as **low**, **medium**, or **high** certainty.²⁵ Our ratings rest on primary and secondary evidence and our general impression of each assumption's plausibility. Importantly, many stages of the theory of change are difficult to measure, lack a robust evidence base, or have not yet occurred. Additional assumptions about next-gen geothermal technologies, not specific to Project InnerSpace, appear in our strategy report [Unleashing Clean Energy in the U.S.](#)

1. Derisking geothermal addresses a key barrier to deployment (**high certainty**)

We are highly certain that high upfront risk is a key barrier to geothermal deployment, and that reducing exploration and financing risk are the right levers. Pre-drilling and exploratory activities account for a small portion of project costs, but are critical to success.²⁶ Before drilling and testing, considerable uncertainty remains about the quality of geothermal resources at a given site, and developers can fail to find resources suitable for commercially viable production (see **Figure 3** for a conceptual model of risks and

²⁵ We describe our certainty as low/medium/high to increase readability and avoid false precision. Since these terms can be interpreted differently, we use rough heuristics to define them as percentage likelihoods the assumption is, on average, correct. Low = 0-60%, medium = 60-80%, high = 80-100%

²⁶ Small share of project costs: "The costs of pre-drilling and exploration drilling activities are comparatively small with respect to overall development costs; however, they directly influence subsequent drilling success rates and thus have a major financial impact on projects. In a 2016 analysis, Wall and Dobson found that exploration drilling results led to drilling full-sized development wells less than one third of the time. Exploration, confirmation, and development-well drilling collectively account for 30%–50% of the costs of geothermal development (Bromley et al. 2010). The cascading effects of exploration activities—from pre-drilling geotechnical studies through exploration, confirmation, and development drilling—have a collective impact on overall project costs and success." [DOE, 2019](#).

Percentage of project costs: *The Future of Geothermal in Texas*, a report that includes various Project InnerSpace staff as lead authors, estimated that pre-development surveys, exploration, and appraisal constitute approximately 10 percent of total expenses for geothermal projects. See Table 5.3. Project cost phasing by geothermal technology. [University of Texas, Austin, 2023](#).

costs in geothermal projects).²⁷ This high risk can make it harder for developers to secure funding for exploration and initial drilling, leading to delays or stalled projects.²⁸

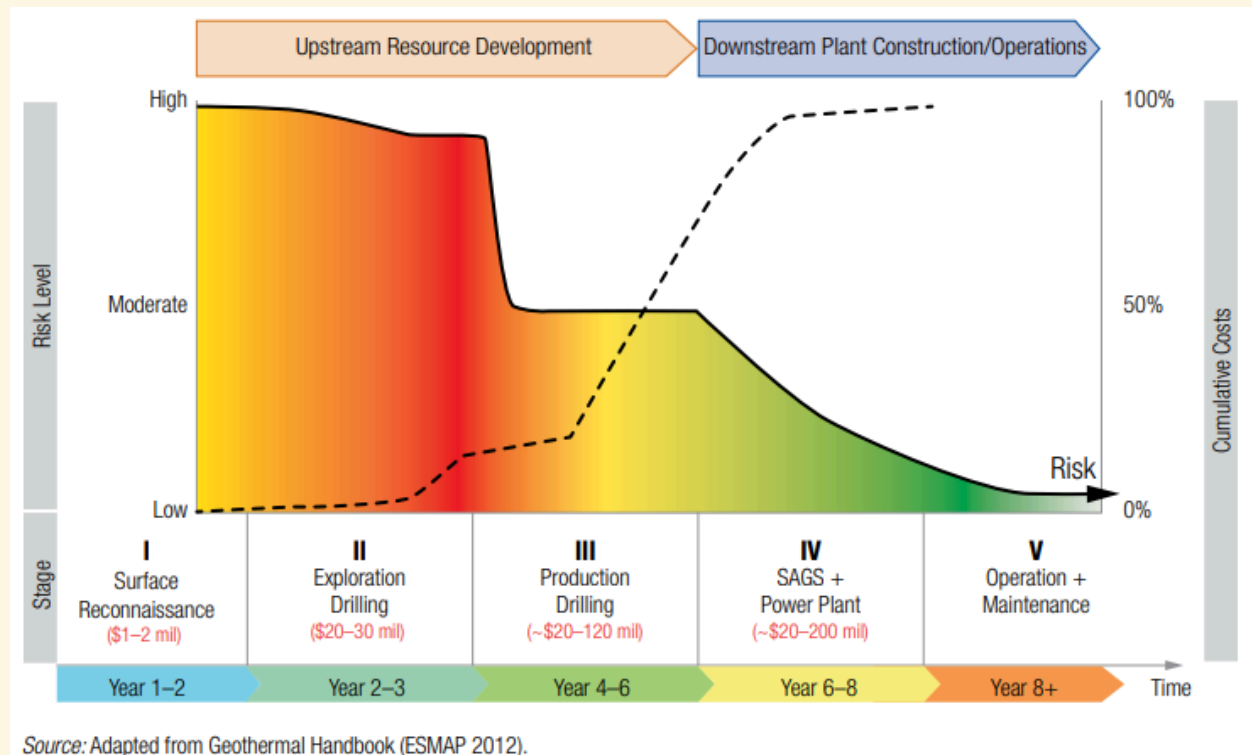


Figure 3: Conceptual model of risk and cumulative costs for geothermal projects²⁹

DOE identifies high upfront costs and risks as a key challenge in its *Pathways to Commercial Liftoff* report, stating “the fastest path to enable next-generation scale-up is

²⁷ “In new (“green field”) geothermal projects, the highest risks are faced during the early stages of surface reconnaissance and exploration drilling (Stages I & II). During these early stages of development, there is considerable uncertainty regarding the flow capacity and temperature of the resource, namely, the ability to drill commercially productive wells that will supply a specified generation capacity for a specified length of time is poorly known. This leads to uncertainty in the likely overall cost to extract the geothermal fluids and reinjected the heat-depleted brine to replenish the reservoir. This uncertainty is considerably reduced after drilling and testing have confirmed the resource availability (following the completion of Stage II), which in turn allows the financial feasibility of proceeding with investment in subsequent development stages (Stages III and IV) to be ascertained.” [Energy Sector Management Assistance Program, 2016](#)

²⁸ “While modest in comparison to the total cost of developing all of the stages of a geothermal project, the inability to raise funds for exploration and initial drilling can delay or sometimes even stall geothermal projects. Raising this risk capital can be particularly challenging for private-sector geothermal developers, since exploration drilling is typically funded with owner equity, which can be lost if the project turns out not to be feasible. Therefore, real or perceived “resource risk” has become a common barrier to advancing geothermal development around the world.” [Energy Sector Management Assistance Program, 2016](#)

²⁹ See Figure 1, [Energy Sector Management Assistance Program, 2016](#)

early capital to finance new demonstration projects.”³⁰ DOE’s *GeoVision* report similarly advocates for increased resource assessments and improved site characteristics.³¹ Most of Project InnerSpace’s inputs aim to derisk next-gen geothermal, whether by decreasing exploration risks through GeoMap or crowding in additional finance. We think its work has connected the industry to strategic investors and investor-offtakers and built interest among O&G majors.

2. Derisking will lead to more projects being developed, and more projects will lead to lower costs (medium certainty)

We think GeoMap can increase the likelihood of project success by showing where resources are likely to be, shortening development timelines, and attracting investors. However, we are unsure how large this effect will be, for two reasons:

- **Other barriers remain:** Geothermal projects face a mix of technical and non-technical barriers (e.g., permitting and transmission), and mapping and early financing address only some.
- **Data quality limits mapping’s usefulness:** GeoMap’s value will depend on data quality and whether stakeholders actually use it. Legacy subsurface data could be location-biased and clustered (e.g., boreholes close to other boreholes), which increases model uncertainty.³² We believe Project InnerSpace is aware of potential data quality issues and plans to ensure quality control.

We think more projects will lower costs because some next-gen technologies will follow a learning curve. For example, EGS has become cheaper over time. Iterative improvements and technical advancements helped drop its overnight capital cost from \$27,800 per kilowatt in 2021 to \$14,700 per kilowatt in 2023.³³ However, considerable uncertainty remains about what kind of learning curve a new technology will follow. For more information, see our strategy report on [Unleashing Clean Energy in the U.S.](#)

³⁰ “The fastest path to enable next-generation scale-up is early capital to finance new demonstration projects. This will reduce developer time spent raising equity and increase the asset base, triggering a positive feedback loop in which future projects benefit from the drilling improvements demonstrated from past projects, have lower costs, and require less equity. It will also increase the incentive for developers to expand to new sites.” [DOE, 2025](#).

³¹ “Variables such as market, transmission, and stakeholder support for a project cannot be determined without first understanding the resource potential— that is, where is the resource and what is its grade or quality? As such, the resulting economic determinations are only as accurate as the quality of the resource assessment data on which they are based. Mitigating uncertainty in resource assessments lowers the risk of unproductive exploration, thus reducing development costs.” [DOE, 2019](#)

³² “The ability to predict subsurface properties, such as temperature, relies on calibrating models against existing data. If the existing data are clustered, and there is a significant sampling bias then making predictions, based on models, away from data rich areas inevitably comes with an increased uncertainty. Representative datasets and associated statistics are vital for uncertainty modeling as sampling bias will bias any analysis of the uncertainties (Pyrz and White., 2015).” [Ireland et al. 2021](#)

³³ “Field evidence resulted in a reduction of the Overnight Capital Cost (OCC) estimate of \$27,800 per kW in 2021 to a 2023 estimate of ~\$14,700 per kW.” [DOE, 2025](#)

3. GeoMap can facilitate the development of supportive policies (medium certainty)

We think improving the quality and quantity of geothermal data in data-scarce areas could help advocates develop policy recommendations and build momentum for geothermal, making supportive policies and investments more likely. Project InnerSpace already uses GeoMap this way. For example, it presented GeoMap findings and specific policy recommendations to a New Mexico legislative committee in 2025, and GeoMap estimates anchored the launch of its policy initiative in Indonesia.³⁴ GeoMap also informed the IEA's estimates of global geothermal potential in its report [The Future of Geothermal Energy](#), which urges governments to adopt geothermal-specific policies.³⁵ However, we have not yet seen direct evidence that GeoMap data led to a specific policy decision, so we think this pathway remains plausible but unproven.

4. Project InnerSpace is increasing the speed of resource characterization mapping in LMICs relative to the counterfactual (high certainty)

The U.S. Geological Survey and the National Renewable Energy Laboratory are among the U.S. entities working on geothermal resource characterization.³⁶ Even with both entities working on it, the U.S. still needs more data to reduce uncertainty and identify more resources.³⁷ We think that if a wealthy country such as the U.S. needs more data, LMICs probably do too, and their funding is likely scarcer. We also believe private companies are not motivated to make global maps public because public data would benefit their competitors. According to Project InnerSpace, governments could fund some of its

³⁴ New Mexico: See [Project InnerSpace, 2025](#)

Indonesia: "Yet, according to initial data from Project InnerSpace's GeoMap™, there's an estimated 3,000 GW of untapped geothermal potential in Indonesia. Of this, 20 GW could meet nearly half of the country's energy needs at a levelized cost of electricity (LCOE) below \$150 per MWh. To help harness this potential, Project InnerSpace and IESR have launched an initiative to gather insights and feedback from key stakeholders. Their work will culminate in a report, *The Future of Geothermal in Indonesia*, set for publication in fall 2025 in both English and Bahasa Indonesia." [ThinkGeoEnergy, 2025](#)

³⁵ "Most of the geological data supporting this analysis are freely accessible through the GeoMAP platform, developed by Project InnerSpace™ in partnership with Google." [IEA, 2024](#)

³⁶ "The U.S. Geological Survey and the National Renewable Energy Laboratory developed national-scale assessments of conventional hydrothermal resources and EGS resources. The U.S. Geological Survey estimates more than 30 GWe of undiscovered conventional hydrothermal resource potential in the United States (Williams et al. 2008), and the National Renewable Energy Laboratory (Augustine 2016) estimates more than 5,000 GWe of EGS potential at depths between 3 and 7 kilometers (about 2 to 4 miles) across the country." [DOE, 2019](#)

³⁷ "Improving the quantity and spatial resolution of national-scale assessment data will reduce uncertainty and can potentially identify more resources (in terms of quantity and geographic distribution) than estimated as of 2017. As an example, the GeoVision analysis considered sensitivity runs comparing regional, high-resolution EGS resource assessments with broader national-scale data assessments based on EGS resource data from Southern Methodist University. The result was the identification of more than 84 GWe of additional resources in the Great Basin area alone (Augustine et al. 2019)." [DOE, 2019](#)

planned mapping if it did not exist, but this would likely occur piecemeal, with varying quality and consistency.

What Is Project InnerSpace's Cost-Effectiveness?

Cost-effectiveness estimates for Project InnerSpace, expressed in dollars per metric ton of CO₂-equivalent reduced or avoided, are being finalized and will be added to the report upon completion.

Is There Room for More Funding?

Budget and Fundraising Needs

Project InnerSpace's 2026 operating budget is about \$11.1 million. It intentionally budgeted a deficit for 2026, drawing on a multi-million-dollar unrestricted gift received in 2024 to support multi-year operations. As of late September 2026, it expected a fundraising gap of roughly \$500,000 to \$1 million for the rest of the year.

Project InnerSpace expects its 2027 budget to be similar to its 2026 budget, reflecting reduced federal support. This budget leaves it with a \$5 million fundraising target for 2027.

Planned Uses of Additional Funding

Project InnerSpace said it could deploy \$3 million to \$5 million over the next 12 months across three priorities: a 12-state research, ecosystem-building, and policy education campaign; AI-enabled improvements to the GeoMap user interface; and additional GeoFund awards in 2027. Project InnerSpace splits the policy campaign roughly evenly between its 501(c)(3) and 501(c)(4) entities, has attracted donor interest, and is on track to raise about half of its \$6 million two-year budget, which runs from late 2026 through mid-2028.³⁸ Separately, Project InnerSpace is developing a suite of standardized, open-source contracts and financial instruments to help institutional investors engage in geothermal, and plans to continue this work in 2027. This work is outside the scope of our evaluation and the \$3 million to \$5 million estimate above. However, Project InnerSpace told us it could use more than \$5 million if the estimate included this work.

Funders

Project InnerSpace's major funders include family offices and foundations like a third-party donor facilitated by Founders Pledge, Giving Green, the Grantham Foundation

³⁸ Project InnerSpace's 501(c)(3) arm will focus on research and ecosystem-building, while its 501(c)(4) arm will focus on advocacy.

for the Protection of the Environment, and Quadrature Climate Foundation.³⁹ Project InnerSpace said its collaboration with Google on GeoMap was in-kind, not financial. We think it will likely continue to receive funding from some of the listed philanthropic funders and gain more as it becomes better known. However, we think the scope of its work means it can comfortably absorb significant additional funding.

DOE GEODE Award

In 2023, Project InnerSpace and SPE won a \$165 million award from DOE for GEODE.⁴⁰ According to Project InnerSpace, this funding is restricted and does not cover its core activities. Of the total, the partners will regrant \$155 million through a competitive solicitation process, and the remaining \$10 million will be split among the partner organizations, with Project InnerSpace receiving \$3 million for five years of work. Because this funding will not cover core activities and is relatively low when spread over five years, we do not think it should significantly alter our view of Project InnerSpace's room for more funding.

Are There Major Co-Benefits or Potential Risks?

We think the primary co-benefit of Project InnerSpace's work is job creation. Promoting technology transfer from the O&G industry to geothermal could help former O&G workers find high-paying jobs in the geothermal industry, enable a just transition for those workers, and reduce backlash against the clean energy transition from certain constituencies.

³⁹ Project InnerSpace's funders: "Project InnerSpace is 100% funded by philanthropy, with our supporters including Schmidt Futures, the Grantham Foundation for the Protection of the Environment, Founder's Pledge, the Greenbridge Family Foundation, the Bernard and Anne Spitzer Charitable Trust, and the Dreamery Foundation." [Project InnerSpace, accessed 2026](#)
Giving Green: We have given Project InnerSpace funding in 2024 and 2025. Please see our past grant distributions for more information. [Giving Green, n.d.](#)
Quadrature Climate Foundation: "Project InnerSpace, Inc., Term 12 months, Grant amount \$500,000, Awarded date 13 Feb 2025, Funding to accelerate geothermal energy in the U.K. and Asia." [Quadrature Climate Foundation, n.d.](#)
U.S. Department of Energy: "Fueled by \$10 million in funding from the U.S. Department of Energy (DOE), this initial roadmapping phase sets the foundation for a comprehensive plan to harness geothermal energy's vast potential, leveraging the extensive experience and technologies from the oil and gas industry. The GEODE consortium brings together experts from over 100 partner entities across the energy industry, led by Project InnerSpace and the Society of Petroleum Engineers. DOE expects GEODE will be a 5-year effort, with the consortium issuing competitive solicitations of up to \$155 million for research activities over the latter four years, pending appropriations." [Geothermal Energy from Oil and Gas Demonstrated Engineering \(GEODE\), 2024](#)

⁴⁰ "Fueled by \$10 million in funding from the U.S. Department of Energy (DOE), this initial roadmapping phase sets the foundation for a comprehensive plan to harness geothermal energy's vast potential, leveraging the extensive experience and technologies from the oil and gas industry. The GEODE consortium brings together experts from over 100 partner entities across the energy industry, led by Project InnerSpace and the Society of Petroleum Engineers. DOE expects GEODE will be a 5-year effort, with the consortium issuing competitive solicitations of up to \$155 million for research activities over the latter four years, pending appropriations." [GEODE, 2024](#)

We think the primary potential risk is conflicting interests from O&G involvement if new geothermal development is centralized within the O&G sector. We outline this concern in our strategy report on [Unleashing Clean Energy in the U.S.](#)

Key Uncertainties and Open Questions

- **Whether next-gen technologies will advance quickly enough to deliver substantially more geothermal power:** Geothermal's future cost-competitiveness depends on how quickly next-gen technologies will improve and fall in price. To play a major role on the grid, they must compete with solar and wind paired with battery storage, and with other clean firm options like nuclear. EGS costs about \$100 to \$240 per megawatt-hour, similar to new nuclear power. DOE set a goal to reach \$45 per megawatt-hour by 2035.⁴¹ Recent analysis suggests that EGS could fall to around \$80 per megawatt-hour by the end of the decade and about \$50 per megawatt-hour by 2035. If these reductions occur, EGS would become cost-competitive with wind power.⁴² It is also unclear how easily O&G skills and techniques can transfer to next-gen geothermal. Even so, we think supporting geothermal is valuable because it diversifies the clean energy portfolio and hedges against other clean technologies falling short or scaling too slowly.
- **Betting on different next-gen geothermal technologies:** We are uncertain which next-gen technologies will yield the greatest impact relative to investment: those nearing commercial development (e.g., EGS) or those further from commercialization but potentially more efficient (e.g., superhot rock geothermal). Giving Green is hedging its bets by supporting Project InnerSpace and [Clean Air Task Force](#) (CATF), which take different approaches to advancing geothermal energy. Project InnerSpace focuses on technologies that are newer than conventional geothermal but further along than superhot rock geothermal, which is CATF's primary focus. We think superhot rock geothermal is less certain to succeed, but if it becomes commercially viable, it could offer cheaper, abundant, carbon-free energy. Given this uncertainty, we think it is important to remain technology-agnostic and diversify the next-gen technologies we support.
- **Ability to execute as it grows:** As of October 2026, Project InnerSpace has 27 staff globally and manages several large-scale projects. Fast-growing organizations can struggle if their operations do not keep pace. In 2023, Project InnerSpace added to its leadership team and updated its organizational model to build capacity. We have no reason to think it is struggling with growth, but we will continue to monitor.

⁴¹"The Enhanced Geothermal Shot targets an aggressive yet plausible path to a 90 percent reduction in the cost of EGS by 2035, to an effective LCOE of \$45/MWh." [DOE, 2025](#).

⁴²"Today, EGS price estimates are between about \$100 and \$240 per megawatt hour—near the cost of new nuclear power.²⁵ However, recent analysis points to EGS reaching \$80 per megawatt hour by the end of the decade and \$50 by 2035. This price drop, if actualized, would bring EGS to passing parity with thermal power generation and somewhere between onshore and offshore wind." [Carnegie Endowment, 2025](#).

- **Ability to bridge major financing gaps:** Next-gen geothermal projects require large upfront investments, but many traditional investors see them as too risky for the returns they offer. This risk leaves a funding gap, sometimes called the “valley of death,” between early demonstrations and commercial-scale projects. Project InnerSpace tries to help close this gap by reducing exploration risk through GeoMap, building investor interest, and building an investment vehicle through GeoForce. However, because GeoForce has not yet launched and we have not evaluated it, we are unsure how much capital it will mobilize relative to what next-gen geothermal requires.

Bottom Line and Next Steps

We classify Project InnerSpace as one of our Top Climate Nonprofits. We think its theory of change is well supported (although some links remain uncertain), it has positioned itself as a leader in the geothermal sector, and it likely has room for more funding. We also think its strategy of fast iteration and quickly getting next-gen technologies onto a learning curve complements that of CATF, another Top Climate Nonprofit, whose geothermal work focuses on superhot rock geothermal energy. We think this portfolio approach of supporting different technologies and strategies increases the likelihood of advancing the geothermal sector.

Key accomplishments include:

- **Building GeoMap, a public geothermal resource map covering every region of the world** and, according to Project InnerSpace, used by about 5,500 entities across academia, industry, finance, government, and media.
- **Investing \$16.6 million in research that supports 300 organizations worldwide.**
- **Leading a major DOE-funded industry-wide roadmapping exercise** intended to engage oil and gas industry professionals in geothermal technical challenges.
- **Convening more than 4,000 participants across political lines through its Geothermal House events.**

Our main uncertainties are whether next-gen geothermal technologies will become cheap enough to compete with other clean energy sources, and whether Project InnerSpace can mobilize enough capital to bridge the financing gap between early demonstrations and commercial-scale projects. Project InnerSpace would use additional funding for a 12-state research, ecosystem-building, and policy education campaign; AI-enabled improvements to GeoMap; and more GeoFund awards.

[Explore more ways to give to Project InnerSpace and more.](#)



Giving Green was founded to help donors cut through the complexity of climate philanthropy and direct their resources for maximum impact.

Our founder, Dan Stein, Ph.D., spent 15 years developing evidence-based strategies in global philanthropy. He saw people eager to fight climate change but paralyzed by its scale. In 2019, with support from IDinsight, he launched Giving Green to rigorously evaluate solutions and share clear guidance.

What began as a side project is now a team directing tens of millions of dollars to high-impact initiatives. Our success is shared—with donors ranging from kids donating allowances to retirees investing in a better future. We believe anyone can start small and still make a huge difference.

Thank you for joining us on the path to net zero.
Together, we keep moving forward.