



## Our Work in Action

# Bedrock Energy is unlocking geothermal for commercial buildings

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Elemental Impact



When it comes to upgrading commercial and multi-family buildings, most eyes turn skyward—to solar panels, green roofs, or new HVAC systems. But another pivotal breakthrough is happening underground: geothermal, a renewable energy source that uses heat from Earth’s core.

This shift is long overdue: despite decades of progress in other sectors, **more than half of commercial buildings** in the US still use fossil fuels for heating and cooling. **Bedrock Energy** is out to change that by enabling buildings to tap directly into the carbon-free energy sitting right below ground. They are not reinventing geothermal, but are instead reengineering how it gets deployed to better fit hyper-local energy needs and allow for installation in dense urban environments.

In 2024, with support from Elemental Impact, Bedrock Energy successfully debuted their first commercial demonstration of a geothermal borefield in Austin, Texas, which currently provides 35 tons of heating and cooling to four commercial tenants in Austin’s South Congress Business District. With just three months of build time, Bedrock’s demonstration achieved the following impact:

<div>Austin, TX</div> 	53%	53%
	energy cost savings for customer	reduction in Scope 2 emissions from traditional heating and cooling systems
1,000 - 1,500 ft		
drilling depth decreases installation footprint and unlocks geothermal for urban environments		

The Opportunity: Tapping into the energy beneath each building

Buildings are responsible for nearly **20% of U.S. greenhouse gas emissions**, with heating and cooling systems as the primary culprit. While geothermal technology offers a clean solution—and ground-source heat pumps have become increasingly commonplace in single-family homes—these systems remain cost-prohibitive for large buildings like

office towers or apartment complexes, particularly in dense urban areas where space is at a premium.

Elemental invested in Bedrock in 2023—our [second](#) investment in geothermal—because of their unique approach to tackling the adoption barriers for commercial geothermal use. Co-founders Joselyn Lai and Silviu Livescu have a two-part vision: cutting costs for commercial and multi-family building occupants by efficiently utilizing the untapped domestic energy resources beneath our feet, while simultaneously creating new jobs.

Bedrock's unique technology stack re-engineers oil and gas coiled-tubing techniques to accommodate the small footprints and code compliance restrictions of urban settings. To create geo-fields—arrays of deep, narrow bores drilled into the earth—Bedrock deploys drilling automation algorithms that can unlock depths of 1,000-1,500+ feet (compared to 250-800 feet for traditional geothermal bores) allowing them to achieve the same results using fewer boreholes and, thus, less space. Their technology regularly reduces drilling time by 50-80% compared to traditional methods and decreases the footprint of the borehole field area by 50-75%, unlocking valuable square footage for existing commercial and multi-family buildings. Because geothermal energy is drawn on-site and reduces electric load on the grid, the Bedrock approach also reduces the need to build new transmission & distribution lines for power capacity expansion.

At scale, Bedrock Energy can help their customers save 50% on energy costs and reduce building greenhouse gas emissions by more than 25%.

### Energy Costs

BEFORE  
BEDROCK



AFTER  
BEDROCK

50% cost savings

### Greenhouse gas emissions

BEFORE  
BEDROCK



AFTER  
BEDROCK

25% emissions  
reductions

As Bedrock scales, so will the demand for a skilled workforce, creating financially stable and safe career opportunities—particularly for oil and gas professionals eager to apply their drilling expertise to geothermal applications. Through this project, Bedrock hired its first drilling engineers, drill operators, field technicians, and site supervisors—all earning [above Texas' per capita median income](#). Seven new hires transitioned from careers in oil and gas. These jobs offer a clear path for these workers, who are increasingly drawn to Bedrock not only for the chance to work on cutting-edge energy solutions, but also for the promise of good, consistent salaries and safe working conditions closer to home.

*“We invested in Bedrock because they’re solving one of the biggest decarbonization challenges hiding in plain sight: how commercial and multi-family buildings are heated and cooled. Their approach makes geothermal not just viable, but scalable, and economically attractive to property owners. It’s exactly the kind of*

*innovation we look for: deeply innovative, increasingly needed, and built for real-world impact.” – Gabriel Scheer, Senior Director of Innovation at Elemental Impact*

## Elemental’s Investment: Demonstrating commercial scale and educating the market

Elemental’s \$1M investment capitalized Bedrock’s first commercial demonstration system in Austin and enabled the design and installation of an optimized borehole heat exchanger (GHX) system—a project that involved engineering collaboration, subsurface testing, and deployment.

Over the course of the project, Bedrock successfully deployed their technology with a real estate developer, built a customer success platform, and expanded their offerings to serve a broader market interested in geothermal. This installation led to a 53% energy cost savings and opened up valuable square footage previously occupied by noisy compressors, allowing the reclamation of that space for other uses—in this case, a building-wide community picnic area.

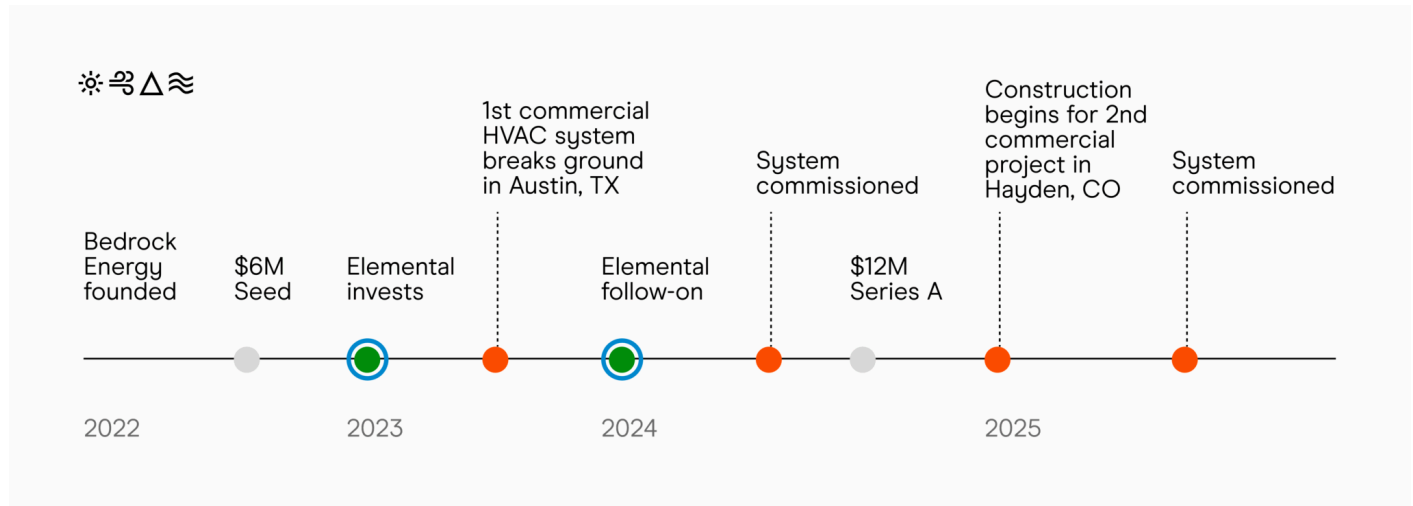
In addition to funding the project, Elemental provided strategic coaching on Bedrock’s communications and policy strategy. As the project was being deployed, it was essential for Bedrock to build buy-in from the local community to ensure the project was supported and trusted by the people it would most directly impact.

Elemental helped the Bedrock team develop a holistic communications strategy, including collaborating on a press release that resulted in national and local media coverage in outlets like [The Hill](#) and [The Texas Signal](#). With Elemental’s support, the team hosted a celebratory [ribbon cutting event](#) with 50+ attendees—from bipartisan elected officials, to policy groups and community leaders.

We encouraged the company to prioritize local engagement early, advising on the best approach to resonate with bipartisan policymakers and local Texas communities. As a result, we collaborated on a [policy brief](#) on geothermal, which informed new policies in Texas and New York to streamline geothermal applications.

*“We dug into our project just a couple of months after Elemental’s investment. Throughout the process, we leaned heavily on their support, particularly around*

*cultivating strong community relationships. Elemental guided our messaging to ensure neighbors understood what was happening, and they helped us prepare for the project unveiling by inviting local officials interested in grid demand management. Their guidance turned what could have been a technical launch into a moment of shared excitement and local pride.” – Joselyn Lai, Co-Founder & CEO, Bedrock Energy*



## Scaling Up: Operations, workforce, and geographical reach

Following their project deployment, Bedrock successfully raised a \$12M Series A to continue scaling their operations and expand to new geographies. They are currently building out their team with a dozen new hires to advance key technical milestones, including the launch of the industry’s first real-time 3D drilling visualization platform. This breakthrough gives customers unprecedented visibility into what’s happening underground, addressing a long-standing gap, and major customer pain point, in geothermal deployment. Bedrock is also continuing to work towards shrinking their equipment footprint to open up new commercial opportunities for urban retrofits.

Moving forward, learnings from their Austin project will be directly applied to future projects, including Bedrock’s newest deployment in Hayden, Colorado, which is currently underway and will provide 560 tons of heating and cooling to buildings in Hayden’s business district. This represents a roughly 16x scale up from Bedrock’s deployment in Austin, demonstrating the company’s continued momentum and path to scale.

Bedrock is also exploring new opportunities with a range of customers—including **energy-intensive data centers** that are increasingly seeking sustainable, on-site solutions

to power their operations. With expansion plans right now for commercial and multi-family buildings targeting states like Utah, New Mexico, and New York—where favorable policies and strong geothermal resources align—Bedrock is helping galvanize a national market for next-generation geothermal solutions.

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