



Geothermal Optimization Act of 2024

The Geothermal Advantage: Dispatchable, Abundant, Scalable, High-Paying, and Versatile

Geothermal power offers several unique advantages that distinguish it from other forms of clean energy:

- **Dispatchable:** Geothermal power plants produce electricity 24/7, providing clean, firm capacity that can complement renewables, such as wind and solar, and secure grid reliability.
- **Abundant:** Next-generation geothermal energy technologies, such as enhanced geothermal systems (EGS) and advanced (closed-loop) geothermal systems (AGS), tap into widely-available subsurface heat resources, expanding geothermal's suitability beyond hot and temperate regions.
- **Scalable:** Next-generation geothermal power plants can be scaled to match local demand—ranging from small, modular units to large, utility-scale power plants supplying electricity to the grid.
- **High-Paying:** The operational similarities between geothermal and oil and gas development offers the existing oil and gas workforce new pathways to high-paying jobs.
- **Versatile:** Geothermal heat can be used for industrial processes, mineral production, as well as aquaculture and agricultural applications, energy storage, and hydrogen production. It is especially suitable for energy-intensive direct air capture (DAC) facilities and data centers.

The Permitting Problem

In 2005, Congress authorized the Bureau of Land Management (BLM) and Forest Service to use categorical exclusions to streamline the environmental analysis required when approving certain oil and gas exploration or development of activities.

Despite the operational similarities to oil and gas drilling, geothermal projects can require separate environmental reviews at every phase of development under the National Environmental Protection Act (NEPA). According to a report conducted by the National Renewable Energy Lab (NREL) in 2014,¹ one location for project development could trigger 6 different reviews and take 7-10 years to develop a project. By way of comparison, a GAO report from 2011² found that BLM field offices used a categorical exclusion to expedite the approval

¹ Geothermal Permitting and NEPA Timeline Analysis, Transactions (2014)

² Energy Policy Act of 2005: BLM's Use of Section 390 Categorical Exclusions for Oil and Gas Development

6,900 oil-and-gas-related activities from fiscal year 2006 through fiscal year 2008. The drilling advancements that came from “learning by doing” in the field led to the advancement of drilling technologies, unleashing huge improvements and driving down the costs of oil and gas production. Taking the same approach to expanding deployment of next-generation geothermal will unlock similar innovation through “learning by doing” and development optimization.

The Solution

- Provide geothermal technologies permitting parity with oil and gas for well-field development and direct the Departments of Interior and Agriculture to develop a new categorical exclusion for exploratory drilling.
- Provide additional resources for field offices by creating a Geothermal Ombudsman and Strike Team for technical assistance and dispute mediation.
- Set new geothermal lease targets on federal lands and require the Bureau of Land Management to hold more frequent auctions.