



H.R. 8437, Geo POWER Act
(Amendment in the Nature of a Substitute)
Sponsor: Rep. Nick Begich (R-AK)
Cosponsor: Rep. Susie Lee (D-NV)

Summary

The Geo POWER Act directs the Department of Energy (DOE) to advance next-generation geothermal electricity generation through a milestone-based demonstration program. Although geothermal energy currently provides less than one percent of U.S. electricity,¹ recent advances in drilling technologies have expanded its potential far beyond traditional geothermal regions. According to the National Laboratory of the Rockies, next-generation geothermal could generate 90.5 gigawatts of electricity by 2050, with a total U.S. resource potential of up to 5,000 gigawatts.²

Key Provisions

- **Establishes a Milestone-Based Demonstration Program:**
Amends the Energy Independence and Security Act of 2007 to establish a milestone-based demonstration program that helps de-risk the deployment and commercialization of next-generation geothermal electricity generation technologies.
- **Prioritizes High-Impact Projects:**
Directs DOE to prioritize projects located in regions with limited or no existing electricity generation, projects that improve the characterization of new geothermal resources and technologies, projects with a generation capacity greater than 30 megawatts, and projects with the potential to attract significant private-sector investment.
- **Promotes Geographic Diversity:**
Requires DOE to select at least three demonstration projects by three different entities in three different states.
- **Supports Data Collection and Technology Validation:**
Encourages the collection and public dissemination of technical and geological data to improve understanding of emerging geothermal resources and technologies.
- **Authorizes Demonstration Funding:**
Authorizes \$150 million annually for fiscal years 2027 through 2031, subject to the availability of appropriated funds, to carry out the demonstration program, which sunsets after five years.

¹ "What Is U.S. Electricity Generation by Energy Source? ." *U.S. Energy Information Administration (EIA)*, 29 Feb. 2024, www.eia.gov/tools/faqs/faq.php?id=427&t=3.

² Yancey, Michael. "The Conservative Case for Next Generation Geothermal Energy." *CRES Forum*, 4 Mar. 2025, cresforum.org/publications/the-conservative-case-for-next-generation-geothermal-energy/.