



GEOTHERMAL RISING POLICY

POWERING OUR RENEWABLE FUTURE.

Testimony of Dr. Bryant Jones, Executive Director, on H.R. 6474, To amend the Energy Policy Act of 2005 to expedite geothermal exploration and development in previously studied or developed areas.

Tuesday, December 12, 2023. 10:30am Eastern Time.

Good morning Representative Stauber, Representative Ocasio-Cortez, and Members of the House Natural Resources Committee Subcommittee on Energy and Mineral Resources, thank you for the opportunity to testify at today's hearing and discuss the potential and opportunity of geothermal energy in our nation's energy mix.

My name is Bryant Jones, and I am the Executive Director of Geothermal Rising, the world's oldest geothermal association, serving as the main professional and educational organization for the geothermal community in the United States. Our members harness the heat beneath the Earth's surface for direct use, geothermal heat pumps, and to generate 24/7 carbon-free electricity, critical to achieving reliable, affordable, fully decarbonized buildings, industries, and power grids. Geothermal Rising membership includes project developers, service and equipment providers, universities and research groups, government agencies, public utilities, and other stakeholders.

Geothermal Rising's (GR) mission is to "use the earth to save the earth" by tapping into the extraordinary potential of our geothermal resources. GR's policy work supports this mission by advancing a comprehensive agenda of technology agnostic federal and state-level policies, regulatory work, and general initiatives to accelerate the deployment of all forms of geothermal energy.

Inexhaustible geothermal energy offers a solution to some of our most pressing challenges such as energy reliability and emissions reductions. It is a resource that can generate 24/7 clean electricity, provide heating and cooling for homes and industries, and much more. Frankly, it is an energy source we can't afford not to invest in. Our work at Geothermal Rising centers on decreasing energy costs, increasing efficiency, promoting a strong geothermal workforce, and contributing to a sustainable planet and energy independent nation.

Currently, in the United States, geothermal power plants have an installed capacity of 3,692 MW, however, this represents only 0.4% of total U.S. utility-scale electricity generation and accounted for 1.9% of electricity generation from renewable sources,¹ underscoring the substantial opportunity we have to scale up geothermal energy as we enter this new generation of geothermal technologies and innovation.

The first geothermal power plant in the United States started up more than 60 years ago based on a now mature suite of technologies. Today's newer geothermal technologies leverage the expertise and experience of the North American oil and gas sector and are poised to unleash even more of

¹ <https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php>



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the United States' geothermal potential. Other advantages of geothermal include the domestic co-production of critical minerals, existing supply chains, and high paying jobs that directly transfer from the conventional energy sector. Lastly, the United States is well poised to be the hub of technological development and deployment of geothermal energy that can be implemented at home and exported around the world. However, a critical hurdle stands in the way of realizing this potential – permitting.

As we continue to advocate for the responsible development of geothermal resources and compatible reductions of regulatory red tape, GR acknowledges the importance of environmental assessments and compliance with the National Environmental Policy Act (NEPA). While new legislation creating categorical exclusions for geothermal activities would accelerate clean energy development, it must be approached with caution and responsibility, ensuring adequate safeguards and transparency. To ensure that efforts to streamline permitting are responsible and effective, GR recommends that the Congress urge federal agencies to issue categorical exclusions for activities with minimal environmental impact based on longstanding data from past environmental assessments (EAs) and environmental impact statements (EISs).

GR supports the streamlining of NEPA reviews while maintaining scientific rigor and public participation. We support regulations that shorten review times for environmentally beneficial projects without significant adverse effects, emphasizing high-quality scientific analysis and considerations of climate change impacts and environmental justice. We recognize that NEPA reviews, despite their necessity, can add significant cost, time, and litigation risk to projects. It's crucial that the process is refined to better accommodate the urgent development of clean energy industries like geothermal, which often fall into categories requiring detailed NEPA review.

A recent example is that of the Dixie Meadows Geothermal Utilization Project in Nevada, in which Ormat faced undue lawsuits and delays over concerns about toad habitat. Ormat was seeking to complete the project by a specific deadline to avoid losing \$30 million due to the terms of a power purchase agreement for this 60-megawatt project. Another example is the Gerlach geothermal project, again in Nevada, which faced significant delays due to concerns over views. Given that geothermal is often referred to as the invisible energy resource, has the lowest carbon footprint of all renewable energy technologies, and has the smallest environmental footprint of all energy technologies, there is a clear need for a more streamlined and balanced review process that can efficiently address environmental and community concerns while advancing the development of renewable energy.

GR sees an opportunity for improvement in our 6-8 year permitting timeline for geothermal projects.² As noted in Young et al., 2015 published by the National Renewable Energy Lab, a NEPA review can be triggered up to 6 times in the project development process which is less than ideal for capital management. We advocate for a balanced approach that upholds environmental standards while enabling streamlined development of geothermal energy. This balance can be

² Young et al., 2015



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achieved through carefully crafted categorical exclusions, programmatic and tiered reviews, and other appropriate administrative efficiencies, while ensuring that any proposed action's environmental impact is thoroughly considered and transparently communicated.

Furthermore, GR supports the release of guidance on permitting by the Department of the Interior (DOI) and suggests that the Congress encourage BLM to address industry concerns over geothermal leasing delays, requirements that geothermal permitting review workforce live in remote field offices, and the lack of geothermal technical knowledge in BLM field offices.

In representing the geothermal community, GR strives to be a consensus organization, recognizing that our members may have diverse viewpoints on certain issues. Therefore, while we support the general direction of proposed regulations and legislative efforts to streamline permitting and the development of the geothermal industry, it's important to note that our members may have slightly deviating priorities and interests.

Again, while we advocate for permitting reform in a broad sense, we also emphasize the need for a balanced approach, namely, environmental responsibility and public participation. With the values of responsible resource development at the forefront, the United States can lead the way in clean, renewable geothermal energy while safeguarding our ecosystems and communities.

We are excited to see policy movement supporting geothermal development on Capitol Hill and look forward to working with all of those in our national agencies and Congress to provide a framework to responsibly increase pathways to establish streamlined permitting practices for this unique and vast energy resource, while also providing adequate safeguards and transparency.

The world is watching the United States for how it designs its portfolio in the energy transformation. Geothermal energy must be leveraged if we are to rapidly develop a nation-wide robust power system and a clean sustainable fuel mix, all while creating jobs and bolstering innovative economic and industrial outputs.

Thank you again for this opportunity, and I am happy to answer any questions you may have to the best of my knowledge.

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