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Hearing on "Letting Off Steam: Unleashing Geothermal Energy Development on Federal Land"

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Thank you Chairman Stauber, Representative Begich, and Representative Maloy, for the opportunity to participate in the hearing today. My name is Jake Garfield, I am the Deputy Director for the State of Utah's Office of Energy Development. The mission of our Office is to encourage the development of new energy resources in Utah to ensure that Utah's energy remains reliable and affordable.

Thank you for coming to visit our beautiful state, where we are so excited by the potential of geothermal energy to provide reliable, baseload power to Utah and other parts of the western United States. We are grateful for investments being made by the private industry into developing Utah's geothermal resources, such as FERVO Energy's Cape Station project, currently the world's largest next-generation enhanced geothermal project. We are also extremely grateful for the investments by the U.S. Department of Energy, the University of Utah, and other partners into the FORGE project, a dedicated field laboratory performing cutting-edge research on enhanced geothermal systems.

In Utah, a tremendous amount of our land is Federal land under the jurisdiction of the Bureau of Land Management ("BLM") – roughly 22.8 million acres, or 42% of Utah's land area. But the percentage of BLM land is much higher in Utah's West Desert where the majority of our potential geothermal resources are located. Operating in an environment where the BLM is by far the majority landowner over Utah's geothermal resources is a challenge that we have to live with, and we greatly appreciate the efforts of both Congress and President Trump's Administration to make this situation more manageable.

We appreciate the dedication and hard work of BLM personnel at the Utah State Office, Color Country District Office, and Cedar City Field Office, who I believe are doing their best to make progress on geothermal projects. We are excited about the BLM's recent geothermal lease sale, where 50,961 acres in 14 parcels were sold for $111.47 per acre on average, a record for the Utah

BLM. Clearly, there is a lot of interest in Utah's geothermal potential. While we are pleased with the progress currently happening, we think there is certainly room to improve the BLM's process, through both statutory and regulatory changes.

Today, I would like to make a couple suggestions on ways that the overall permitting process on BLM land could be improved to encourage greater use of this incredible, emission-free energy source beneath our feet.

First, the BLM should put more land up for lease in their yearly geothermal lease sales so that the private sector has more options of sites where they can drill exploratory wells and seek to develop geothermal resources. We know this can be done, because it is already being done by the BLM in Nevada. In the last five years, the Utah BLM has put up a total of 160,031 acres for geothermal lease sale across 59 parcels, while in the same time period the Nevada BLM has put up 706,008 acres for lease sale across 240 parcels. That is 4.4X the total acreage in Nevada vs Utah, and that discrepancy is even more stark when you consider that the Nevada BLM has not even held their 2025 lease sale yet, which will occur in October.

This may not be a straight apples-to-apples comparison – Nevada is a larger state with even more BLM land than Utah. But the private sector interest in Utah's geothermal resources is tremendous, and our conversations with geothermal companies show that the demand to lease geothermal parcels in Utah far exceeds the supply being offered by the Utah BLM over the last five years. The Utah Geological Survey ("UGS") recently received funding during the 2025 Utah Legislative Session to complete geothermal resource exploration projects across Utah. The BLM should consider relying on the data UGS compiles to verify nominated lands and identify prospective areas for leasing. This collaboration will lead to better engagement with private industry and state exploration programs, and ensure alignment between the federal government and private industry interested in Utah.

Second, the NEPA process for permitting geothermal development on BLM land after a lease is secured takes far too long, and it hinders the ability of the private sector to fully invest in geothermal exploration and development. A 2014 study[1] by the National Renewable Energy Laboratory found that a typical Environmental Impact Statement for a geothermal project on BLM land takes an average of 824 days, and a typical Environmental Assessment for geothermal projects takes 337 days. Even processing a Categorical Exclusion takes 97 days on average. These long timeframes introduce uncertainties and complexities into the process, which holds back the level of investment we would likely see from the private sector if these time frames were shorter.

[1] Young, K. R., Witherbee, K., Levine, A., Keller, A., Balu, J., & Bennett, M. (2014). *Geothermal permitting and NEPA timelines*. In *GRC Transactions* (Vol. 38, pp. 893–902). National Renewable Energy Laboratory. *Available at* https://gdr.openei.org/files/1258/Geothermal%20Permitting%20and%20NEPA%20Timeline%20Analysis%20-%20FINAL.pdf.

A practical solution to unwinding these permitting delays would be to introduce additional Categorical Exclusions for geothermal development. We have already seen encouraging developments, including new Categorical Exclusions adopted by the BLM in April of last year and January of this year, which allow smaller-scale projects to conduct exploratory drilling without extensive environmental review. But there are still many opportunities to bring additional Categorical Exclusions into the process. For example, Section 390 of the Energy Policy Act of 2005 includes certain Categorical Exclusions for oil and gas development that were not extended to geothermal development. Oil and gas drilling in a developed field or at a location where drilling has occurred within the last 5 years is categorically excluded under the 2005 Act. Seeing as how the drilling process for geothermal wells is very similar to the drilling process for oil and gas wells, these are the types of Categorical Exclusions that should be expanded to include geothermal energy.

Although Utah's geothermal areas are dominated by BLM land, the State of Utah actually does a fair amount of permitting on state lands managed by the Utah Trust Lands Administration, on lands dedicated to producing revenue for Utah's public education system. The geothermal permitting process on these state trust lands is much quicker than it is on BLM land. For permits and leases on federal land, Utah's regulatory agency for geothermal resources, the Utah Division of Water Rights, issues subsurface exploration permits, production and injection permits, and geothermal water rights on top of the exploration permits the BLM requires. On state lands, there are no duplicating efforts between state and federal regulatory procedures for exploration permits and water rights, making the permitting timeline on state trust lands much quicker. Additionally, Utah does not have any NEPA-type law requiring such lengthy environmental analysis. Protections against environmental degradation are instead built into the State's leasing process. Categorically excluding from NEPA analysis more of the BLM's permitting steps could allow the BLM to create the kinds of efficiencies we see at the state level.

Third, the BLM should update their programmatic EIS for geothermal development across the western United States. Last year under the Biden Administration, the BLM completed its West-Wide Utility-Scale Solar Energy Programmatic EIS, which identified lands Available for Application for solar development. Something similar could happen for geothermal development. While the BLM did complete a Programmatic EIS for Geothermal Leasing in 2008, it is time to update that document using the best available scientific data gleaned from recent exploration and new technological developments. An updated programmatic EIS for geothermal development could identify areas with the greatest geothermal potential, and where geothermal development should be prioritized as the highest and best use of the land, possibly to the exclusion of other uses.

Fourth, the BLM should find ways to decrease the permitting time for new transmission lines. Transmission is uniquely challenging for geothermal resources, since power generation must occur at the energy site, unlike more traditional fuels sources like coal or natural gas where fuels can be transported to generation locations. Permitting new transmission lines to Utah's

geothermal hot spots will be essential to putting more geothermal electrons on the gird and realizing Utah's full geothermal potential.

When permitting new transmission lines takes too long it makes development of renewable resources much more difficult. As an example, we can look at the TransWest Express transmission line, which will run from Sinclair, Wyoming to Clark County, Nevada, crossing much of Utah along the way. The initial right-of-way application with the BLM was filed in November 2007. Initial construction in Wyoming did not even start until fall of 2023, 16 years later. The BLM's EIS for the project, from Notice of Intent to the Record of Decision, took almost 6 years. Construction is expected to be completed in 2029. The BLM transmission process simply takes too long. We need to establish more energy corridors running through high-need areas that streamline the permitting of future transmission lines. Ultimately, its likely that we will need to see amendments to NEPA itself to expedite faster permitting for transmission lines.

In conclusion, Utah is very optimistic about the future of geothermal resources in Utah, in no small part because of the attention that Congress and the Administration are giving to geothermal development on Federal lands. We are excited about the geothermal provisions included in the reconciliation package, as well as Representative Maloy's *Geothermal Energy Opportunity Act*, Representative Fulcher's *CLEAN Act*, and other critical pieces of legislation. Thank you for listening to our recommendations and concerns, and for your work to make our energy supply more reliable, secure, and affordable.