



POLICY MEMORANDUM

To: United States Congress
From: Geothermal Resources Council
RE: Supporting the Geothermal Industry in Stimulus Packages
Date: June 8, 2020

Geothermal is a secure fuel, clean energy resource that provides significant environmental and economic benefits to local communities. The GeoVision study, released by the Department of Energy in 2019, notes that the right technology investment would catalyze **\$219 billion in domestic expenditures on geothermal energy** through 2050. Further, the report shows that **“Geothermal can provide more than double the long-term jobs per powered household compared to other electricity-generation technologies considered.”**¹ As we look for ways to drive employment and put people back to work, the geothermal industry stands ready to be part of the solution.

Geothermal energy also presents a compelling opportunity to drive economic activity in one of the hardest hit sectors: oil and gas workers.

As Doug Hollett, former Acting Assistant Secretary for Fossil Energy recently noted:

“Geothermal uses many of the same services, technologies and personnel as the oil and gas sector. In the midst of this historically impactful oil and gas downturn, there is a unique opportunity to quickly leverage oil and gas capabilities and technologies into the geothermal sector while preserving jobs and regional economic viability, and ensuring US energy sector vitality.”²

There is also the opportunity to expand geothermal beyond its traditional geographic footprint. Promising direct use projects at places like the West Virginia University Project³ and the Cornell University Project⁴ where feasibility studies have already been completed could immediately put idle rigs in the Northeast and Midwest to work.

¹ GeoVision Analysis: Results, Opportunities and Impacts. Department of Energy (2019).

² A Historic Downturn Meets Historic Opportunity: Geothermal Development Will Save Oil and Gas Jobs. Hollett, Doug (2020). <https://www.heatbeat.energy/post/a-historic-downturn-meets-historic-opportunity-geothermal-development-will-save-oil-and-gas-jobs>

³ Feasibility of Deep Direct Use Geothermal on the WVU Campus-Morgantown, WV. Garapati and Anderson (2017)

⁴ Earth Source Heat: Feasibility of Deep Direct-Use of Geothermal Energy on the Cornell Campus. Gustafson et al (2018).

Geothermal can create many permanent, high quality jobs while at the same time building clean energy infrastructure that will benefit the United States for decades. Due to the severity of this crisis, we need solutions immediately; 2021 is too late. Decisive action at the federal level is needed and the following R&D and Deployment priorities will ensure this opportunity is captured:

Deployment priorities:

- Restoration of the ITC/PTC to 2017 levels with an extension long enough (5+ years) to provide investment certainty for geothermal development timelines.
- Restoration of the Section 1603 Treasury Grant Program.
- Development of programs to increase access to low cost financing to project development.
- Deploy underutilized staff knowledgeable in subsurface project review, such as BLM permit managers with oil and gas experience, to fast track and streamline geothermal permitting and approvals.

Research and Development priorities:

- Increased Appropriations to the Geothermal Technology Office. The AGILE Act, passed out of Senate Committee last year, would provide a good template.
 - Funding could immediately accelerate and scale up the ongoing Frontier Observatory for Research in Geothermal Energy.
- Increase funding to ARPA-E for the SCALEUP program to immediately finance shovel-ready advanced technologies.
- Expansion of technology transfer programs within the Office of Fossil Energy to immediately restore oil field services jobs by putting people back to work in geothermal, carbon capture and storage, subsurface energy storage, offshore wind and other adjacent industries.

These actions will have an immediate and lasting impact on job creation.

The provisions in the AGILE Act alone could support over 3,500 jobs.⁵ The remaining provisions could accelerate several shovel ready projects and lead to 10,000s of more jobs. A deployment timeline in line with the targets in the GeoVision study would create 8,300 new jobs by next year, and as many as 44,300 new jobs by 2030 based on analysis using the National Renewable Energy Laboratory Jobs and Economic Impact Model.

By contrast, the oil price crash of 2014-15 led to a decrease from 200,800 jobs to 140,900 jobs, a decrease of nearly 60,000. This price crash will likely follow similar patterns as the US rig count has already fallen to just 284 rigs as of June 5, down from 975 rigs just one year ago, and continues to fall rapidly. **Geothermal has the opportunity to put a meaningful percentage of the lost oil and gas jobs back to work immediately and**

⁵ Low-Hanging Fruit for COVID Stimulus and Decarbonization. Breakthrough Institute.

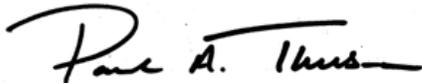
could replace all lost jobs within the decade, but appropriate and decisive policy support is required to make this a reality.

We thank you for your consideration. We are available to answer questions and discuss further at your convenience.

Respectfully,



Tim Latimer
GRC Policy Committee Research Chair
tim@fervoenergy.com



Paul Thomsen
GRC Policy Committee Chair
pthomsen@ormat.com



Will Pettitt, PhD
GRC Executive Director
wpettitt@mygeoenergy.org

The GRC is a non-profit professional and trade association for the geothermal industry and community in the USA and abroad. We were founded in 1972 and are registered in California. We have over 1,300 members from around the world and are working to advance our industry by supporting the development of geothermal energy resources through communication of robust research, knowledge and guidance.