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February 10, 2020

The Honorable Eddie Bernice Johnson Chairwoman Committee on Science, Space and Technology U.S. House of Representatives Washington, DC 20515

The Honorable Frank Lucas Ranking Member Committee on Science, Space and Technology U.S. House of Representatives Washington, DC 20515

Dear Chairwoman Johnson and Ranking Member Lucas,

On behalf of Penn State University, I am writing in support of H.R. 5374, the Advanced Geothermal Research and Development Act of 2019. This bill has the potential to help spur innovations in geothermal energy usage while also helping train the next generation of geothermal scientists.

As you may know, Penn State is one of the leading energy research and education universities in the United States. We have more than 320 individual investigators researching energy issues and offer more than 30 energy-focused undergraduate and graduate degrees. Penn State is among the top 5 universities in scholarly output in five key energy categories: energy policy, fossil fuels, renewable energy, systems technology and environmental impact. In addition, Penn State is the only university in the nation that ranks in the top ten in 18 different research and development (R&D) disciplines including relevant geothermal disciplines such as materials science; engineering; geological and earth sciences; agricultural sciences; and atmospheric science and meteorology.

With one of the key reasons hindering adoption of geothermal power generation being cost effectiveness, H.R. 5374 authorizes much needed R&D in numerous areas that can help overcome barriers to broader adoption of geothermal power. For example, we are pleased to see that the bill will support fundamental research to improve the understanding of the surface areas and volume of fractures, which will better enable activities to enhance geothermal heat production. Additionally, we appreciate that the Committee included report language to encourage the U.S. Department of Energy to develop geothermal curriculum as part of creating the new geothermal workforce development plan.

Thank you for your efforts in drafting this important legislation and continued support for scientific research. If Penn State can be of any additional assistance in supporting H.R. 5374, the Advanced Geothermal Research and Development Act of 2019, please do not hesitate to contact us.

Sincerely,

Thomas L. Richard

Professor of Agricultural and Biological Engineering

Director, Institutes of Energy and the Environment

Jon Richard

Penn State University