

## **Engagement with GR**

I have hosted workshops and chaired countless technical sessions at GRC over the years. I served as a member of the technical organizing committee and have contributed as presenter, organizer, or in other capacity at several GR-hosted events beyond GRC. My geothermal engagement activities outside of GR are too numerous to list here, but engagement is an important part of my responsibilities in my role as geothermal lead at a national lab.

## **Short Bio**

Amanda Kolker, PhD, is the laboratory program manager for Geothermal at NREL. She has more than 15 years of professional experience as a geothermal geologist, specializing in resource exploration and sustainable production of geothermal energy.

With a background in volcanology and geochemistry, Kolker has worked in academia, government, and private industry in the United States and abroad. She values multidisciplinary and innovative approaches to the energy question and enjoys working at the intersections of geoscience, policy, and economics.

Prior to her current role as laboratory program manager, Kolker joined NREL in 2019 as a research scientist, leading international research projects and consortia on exploration and resource assessment, innovative utilization of geothermal energy, energy resilience and equity, and other subjects. She serves as a thought leader in renewable energy strategy and integration efforts at NREL.

## **Written Statement**

I have over 15 years of professional experience as a geothermal geologist, specializing in resource exploration and characterization for geothermal heat-and-power projects with a particular interest in remote and unconventional settings. After completing my Ph.D. in Geology at the University of Alaska Fairbanks (thesis title: GEOLOGIC SETTING OF THE CENTRAL ALASKAN HOT SPRINGS BELT: IMPLICATIONS FOR GEOTHERMAL RESOURCE CAPACITY AND SUSTAINABLE ENERGY PRODUCTION), I worked as a consultant focused on early-phase and greenfield geothermal exploration, primarily for remote communities. During that time I also taught undergrad and graduate level courses on geothermal energy engineering at the Oregon Institute of Technology. Then, I moved to Europe where I worked on the GEO-ENERGY EUROPE "metacluster" that aimed to facilitate technology and knowledge transfer across geothermal energy to benefit deep geothermal energy. The metacluster spanned 23 countries and 600 members, covering the entire "deep geothermal value chain." Then, in 2019, I moved back to the US to work at NREL, drawn by the world-class research performed at US national labs, and NREL's multidisciplinary and innovative approaches to energy integration. My first role at NREL was as a geothermal researcher, where I led a number of high-impact projects such as an international consortium for derisking superhot/supercritical geothermal resources. In 2022 I took on my current role of Laboratory Program Manager for Geothermal Technologies and Geoscience at NREL. In this role, I have grown the NREL geothermal team and RDD&D portfolio by >600% and expanded the breadth of our program to include a broad spectrum of geothermal technologies, analysis, and tools inclusive of emerging technologies in lockstep with the evolving geothermal industry in the US and globally.

### **Plan for the BOD**

I joined NREL eager to work adjacent to the federal government to raise the profile of geothermal energy in the US. NREL provides critical research at the intersections of geoscience, energy technologies, policy, and economics. I have built our program around the goal of serving the evolving geothermal community with the technologies, tools, analysis, and demonstrations it needs to advance geothermal in the US and globally. NREL already has deep connections with the broader geothermal community; by joining the GR BOD I will deepen and strengthen these even further to the mutual benefit of the national lab system, DOE, federal agencies, and the stakeholders represented by GR. I serve as a thought leader in renewable energy strategy and integration efforts at NREL and plan to empower the broader geothermal community by executing research that would truly move the needle (like establishing quantitative research and metrics around geothermal energy's contributions to resilience and national security, for example). I also empower teams through inclusive growth strategies. In the 3.5 years I have led it, the geothermal research team at NREL has grown to be largest in the USDOE national lab system, with a high performing team of global experts with diverse and multidisciplinary backgrounds. I believe the high-CAPEX and (real or perceived) risk profile of geothermal technologies means that early development usually requires public sector support. The broader geothermal community would be empowered by deeper connections between the public and private sectors in the US. But for that to happen, the growing geothermal teams at national labs and government agencies must have a deeper link with the broader geothermal community.