

# Geothermal Energy Policy Statement

## Our Position

Geothermal energy is a renewable, efficient, and reliable source of energy with a significant potential for growth and deployment across the globe. However, it is currently underutilized in most parts of the world and accounts for a small percentage of the world's energy mix today. As the world moves toward cleaner energy, we support the safe development of this resource and encourage its equitable treatment among other forms of renewable energy sources.

## Our Rationale

- Climate change is one of the most significant challenges facing the world today and warrants meaningful action to reduce the environmental impact of the energy industry.
- By scaling up renewable energy sources, countries can reduce their emissions in line with the Paris Agreement goals.
- Geothermal is a renewable energy source with diverse applications to heating, cooling, and even the development of natural resources such as lithium.
- Oil and gas companies already have the necessary expertise in geology, drilling, and reservoir management and can transition into geothermal without any disruption in the existing workforce.
- Despite its benefits, the application for geothermal permits in various jurisdictions is complex and experiences protracted timelines. More efficient, predictable permitting and greater investment in geothermal energy will facilitate a fair, responsible, and sustainable energy transition.
- Switching existing district heating networks to geothermal energy instead of developing new infrastructure could help some regions provide a sustainable source of heat.
- Geothermal energy can also provide baseload power generation and heat to mini-grids and off-grid systems such as islands and remote communities.
- Failure to economically advance geothermal energy resources through policies, financial incentives, and technology investments may slow down the pace of emission reductions needed to achieve the Paris Agreement goals.

## Policy Principles

Regulatory and policy frameworks seeking to enhance the use of geothermal energy should address the following guidelines, which provide the foundation for a sustainable, global, commercial market:

### Policy and Partnerships

- Develop holistic national and regional strategies with clear objectives and support mechanisms for increasing geothermal energy's share of low-carbon economies. Strategies should enable policies for power and district heating/cooling and support multi-stakeholder initiatives, such as public-private partnerships, covering the entire geothermal value chain.

- Fund the collection and sharing of national data on geothermal resources that have the potential to address the barriers of exploration and attract investment.
- Establish a national, inter-agency task force to develop strategies and policies necessary to overcome impediments to developing geothermal energy.
- Create international partnerships among governments, the geothermal value chain, and academia to foster the exchange of information and ideas on best practices that drive the development of geothermal energy worldwide.
- Lift policy restrictions imposed by governments that require firms to use domestic products and services only. Geothermal energy is a dynamic industry based on international partnerships – an expertise that must be leveraged to innovate and expand its use.

#### Permitting

- Coordinate and streamline the geothermal permitting process among various participating entities (e.g., environmental and leasing agencies, ministries, and regional authorities) and remove unnecessary administrative impediments.
- Review and revise the permitting process so that it is no more complicated than permitting processes for other forms of energy development.

#### Research and Development (R&D) and Finance Mechanisms

- Allocate funding for geothermal R&D projects to exploit its potential in various regions.
- Provide stable and consistent tax incentives and financing tools to support geothermal development and overcome the existing lengthy development process. Tax incentives need to be sufficient to ensure parity with other forms of renewable energy, while assuring long-term availability of support such as investment and production tax credits.
- Develop appropriate risk mitigation schemes that match market maturity and provide support during all phases of geothermal projects, including evaluation and exploration. Loans, grants, exploratory phase insurance, and feed-in tariffs are all mechanisms that governments can employ to help reduce financial risk for project developers. Risk insurance funds – set up by some European countries – have been successful in managing geological risk to advance regional geothermal energy projects.

## Our Actions

We believe the geothermal industry is pushing the operational envelope to play an increasingly important role in the global energy mix on the shared journey to net-zero emissions by 2050.

Baker Hughes, as an energy technology company, offers a unique value proposition to the geothermal market. Our expansive energy technology portfolio enables the geothermal sector to utilize relevant technologies, and our experienced subsurface experts and field crews are trained to transition seamlessly and efficiently from oilfields to geothermal fields, be it for reservoir management and downhole solutions, or rotating equipment for geothermal topsides.

We are exploring a variety of promising geothermal innovations. We have testing facilities globally where we simulate actual geothermal conditions, mimic well fluid compositions, deploy our advanced design and additive manufacturing capabilities to create and build 3D printed prototypes and end-use parts optimized for form, fit, and function.

We also engage with trade associations such as the European Geothermal Energy Council (EGEC), Geothermal Rising, Society of Petroleum Engineers (SPE), and the International Geothermal Association.