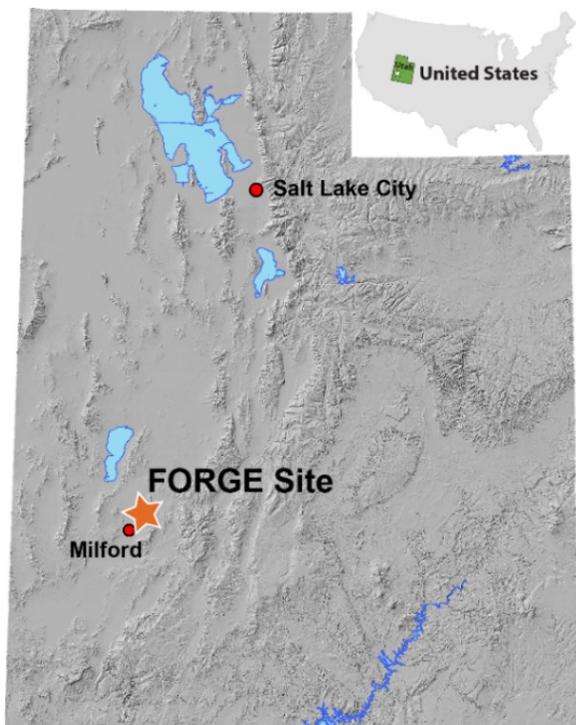


# The Utah **F**rontier **O**bservatory for **R**esearch in **G**eothermal **E**nergy (**FORGE**):

A Laboratory for Characterizing, Creating and Sustaining Enhanced Geothermal Systems

Utah FORGE is a dedicated underground field laboratory sponsored by the Department of Energy for developing, testing, and accelerating breakthroughs in Enhanced Geothermal System (EGS) technologies. The long-term goal is to significantly boost geothermal production of this safe clean energy resource.

Utah FORGE is based at the University of Utah in Salt Lake City but the field laboratory is located near the town of Milford in Beaver County, Utah, on the western flank of the Mineral Mountains. The research began in 2014 and will continue through 2024.



*Milford is approximately 200 miles from SLC.*

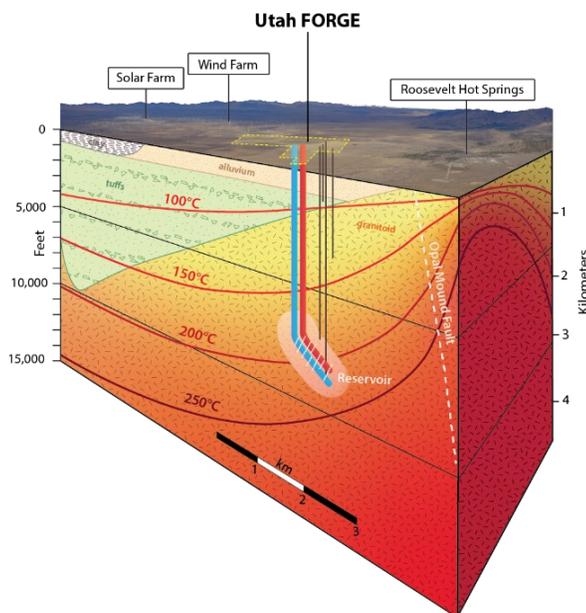


The near-term goals of Utah FORGE are:

- Optimize geothermal drilling
- Test innovative drilling technologies
- Mitigate induced seismicity
- Stimulation of existing fractures in the rock to allow for permeability in the rock to establish and sustain continuous fluid flow and energy transfer
- Create, sustain, and monitor an EGS reservoir for long-term heat transfer

## Enhanced Geothermal System (EGS)

Enhanced Geothermal Systems (EGS), also sometimes called Engineered Geothermal Systems, offer great potential to significantly expand the production of geothermal energy. Currently, geothermal power is generated from natural reservoirs found mostly in the West. This restricts the locations of current geothermal energy developments. EGS technology will greatly expand the availability of resources by making it possible to create a geothermal reservoir anywhere.



The idea behind EGS is to apply methods and tools to extract heat from hot low-permeability rocks. Permeability creation is achieved by enhancing existing fractures. Once the fractures are opened, water can be injected, heated, and produced to generate electricity in power plants or used for district heating.

## The Importance of Geothermal Energy

If we could capture even 2% of the thermal energy at depths of ~2 to 6 miles, we could provide 2000 times the annual energy use in the United States. New technologies, being investigated at Utah FORGE will help to extract this energy.

### Quick Facts

- Project funded to 2024
- ~\$220 million provided by DOE
- 5 wells drilled
- Injection well completed in 2020
- Located near Milford, Utah
- Brings worldwide focus to Utah