

GEOLOGIC HYDROGEN: SUSTAINABLE H₂ PRODUCTION FROM ABIOTIC CATALYST- ENHANCED STIMULATION OF IRON-RICH ROCKS

ABOUT THE PROJECT

H₂ERC will be working on a University of Texas at Austin-led project to explore geologic hydrogen. The proposed \$1.7 million project was selected for funding from the Department of Energy Advanced Research Projects Agency Energy (ARPA-E) and will aim to stimulate hydrogen production from iron rich rocks using natural catalysts. The team will analyze reaction catalysts that exist naturally in iron-rich rock, including nickel and platinum group elements, that could increase serpentinization reaction rates and lower the required reaction temperatures.

In collaboration with H₂ERC, the team will explore the feasibility of this process on different rock types across the United States, including basalts from the Midcontinent Rift in Iowa, banded iron formations in Wyoming and ultramafic rocks in the Midwest.

AT A GLANCE

Project Total: ARPA-E Funding: \$1,700,000*

Project Duration: 2 years

Objectives: Stimulate hydrogen production from iron rich rocks using natural catalysts

Project Location: Locations across the U.S.

**total amount prior to award negotiations*

PROJECT PARTNERS

University of Texas at Austin (Project lead)



ABOUT ARPA-E

ARPA-E advances high-potential, high-impact energy technologies that are too early for private-sector investment. Through ARPA-E funding that empower America's energy researchers to focus on transformational projects, awardees are able to develop entirely new ways to generate, store and use energy that have the potential to radically improve U.S. economic prosperity, national security and environmental well-being.