

Frontiers in Geologic Hydrogen

BESR/CER Joint Spring Meeting

MAY 22, 2025

Description

Meeting the energy demands of a modern and growing society requires consideration and development of all energy options. Geologic hydrogen has the potential to meaningfully supplement conventional resources. This meeting will consider the resource potential and methods of exploration for and production of geologic hydrogen, as well as economic and environmental considerations that need to be addressed before geologic hydrogen can contribute viably to the U.S. energy portfolio. The goal of this meeting is to better understand the technical and regulatory hurdles for making geologic hydrogen commercially viable and determine if there is a role for the NASEM in advancing the science and policy in this sector.

11:00 am ET Introduction

Michael Manga, BESR Chair

11:10 am Keynote speaker: What is geologic hydrogen and what is its role in the future energy portfolio? (15 min presentation + 5 min questions)

Mark Shuster, Texas Bureau of Economic Geologic

SESSION 1: CHARACTERIZATION AND PRODUCTION

Moderated by Jessica Moore

11:30 am Resource potential for natural hydrogen (12 min presentation)

Sarah Gelman, U.S. Geological Survey

11:45 am Detection methods for natural hydrogen (12 min presentation)

Mengli Zhang, Colorado School of Mines

12:00 pm Key challenges in stimulated hydrogen production (12 min presentation)

Alexis Templeton, University of Colorado

12:15 pm Geologic hydrogen production: Geomechanics, reactive fluid transport, and induced seismicity (12 min presentation)

Mengsu Hu, Lawrence Berkeley National Laboratory

12:30 pm Panel Discussion

- Where are there gaps in knowledge about assessments and characterization technologies?

1:00 pm LUNCH

SESSION 2: FUTURE OF R&D IN GEOLOGIC HYDROGEN

Moderated by Jolante W. van Wijk

1:20 pm Keynote speaker: ARPA-E initiatives (15 min presentation + 5 min questions)

Doug Wicks, ARPA-E

1:45 pm Industry Panel (5 min presentation and panel discussion)

Viacheslav Zgonnik, Hyreveal

Florian Osselin / Colin McCulley, Vema Hydrogen

Rafael Villamor-Lora, Eden Geopower

2:30 pm SESSION 3: GROUP DISCUSSION (all previous panelists)

Moderated by David Spears

- What are the issues agencies and industry are concerned about?
- How can the NASEM help further science and policy in this sector?

3:00 pm Adjourn