



2026 Geothermal Rising Conference Program

Agenda Overview

Friday, September 18

- 7:30 AM – 5:00 PM | GRC Workshop Registration
- 8:00 AM – 5:00 PM | GRC Workshop #1: Beyond Conventional PFA with geoPFA: An Open Framework for Geothermal Derisking Analysis and 3D Prospecting*
- 8:00 AM – 4:00 PM | [The Woodlands Geothermal Service Provider Tour](#) *
- 8:00 AM – 5:30 PM | [The Energy Corridor Geothermal Service Providers Tour](#)*

Saturday, September 19

- 7:30 AM – 4:00 PM | GRC Workshop Registration
- 8:00 AM – 12:00 PM | GRC Workshop 2: From Scroll to Story: Becoming a Powerful Geothermal Ambassador on Social Media*
- 9:00 AM – 5:00 PM | [Field Trip – Asia Center & Rice University: A Deep Dive into Geothermal Cooling/Heating](#)*
- 9:30 AM – 5:00 PM | Field Trip – [NASA Space Center Houston](#)*
- 1:00 PM – 5:00 PM | GRC Workshop 3: Building Trust for Geothermal Energy: Community Engagement that Enables Project Delivery*
- 6:10 PM – 9:00 PM | [Field Trip – Houston Astros: A Night at the Park](#)*

Sunday, September 20

- 7:15 AM – 3:45 PM | Golf Tournament*
- 10:00 AM – 4:00 PM | Exhibitor Setup
- 11:00 AM – 3:00 PM | [Geothermal Discovery Day](#)
- 12:00 PM – 8:00 PM | Registration
- 1:00 PM – 3:00 PM | [Field Trip – From Bedrock to Basin: An American Geothermal Wine Tasting*](#)
- 1:10 PM – 4:00 PM | [Field Trip – Houston Astros: A Day at the Park*](#)
- 2:00 PM – 6:00 PM | Speaker Ready Room
- 4:00 PM – 6:00 PM | Geothermal 101
- 6:00 PM – 6:30 PM | GR Student Members Icebreaker
- 6:30 PM – 8:30 PM | Technical Poster Hub
- 6:30 PM – 8:30 PM | Opening Reception and Exhibit

Monday, September 21

- 6:00 AM – 7:00 AM | WING Yoga
- 6:30 AM – 7:30 PM | Registration
- 7:00 AM – 6:00 PM | Speaker Ready Room
- 8:00 AM – 10:00 AM | Opening Plenary Session: Big Vision, Big Energy, Big Geothermal Future
- 9:30 AM – 5:00 PM | Exhibit Hall Open
- 10:00 AM – 10:30 AM | Networking Break
- 10:30 AM – 12:30 PM | Plenary Session II: A New Era for Geothermal Policy
- 12:30 PM – 2:30 PM | Networking Lunch
- 12:30 PM – 2:30 PM | Technical Poster Hub
- 1:00 PM – 2:00 PM | GR Mentor-Mentee Meetup
- 2:00 PM – 5:00 PM | 20-Minute Sponsor Hosted Satellite Sessions
- 3:00 PM – 5:00 PM | Concurrent Technical Sessions 1
 - Session 1A: [Panel - New Tax Rules, New Development Opportunities: Doing Business in Indian Country](#)
 - Session 1B: Special Session: Texas Imperative of Geothermal Resources
 - Session 1C: EGS I – Deployment, Monitoring & Integrated Applications
 - Session 1D: Above-Ground Operations & Power Plant Equipment
 - Session 1E: Economics, Finances & Project Value
 - Session 1F: Geochemistry & Critical Minerals
- 7:00 PM – 9:00 PM | Monday Night Mixer

Tuesday, September 22

- 6:30 AM – 6:30 PM | Registration
- 7:00 AM – 6:00 PM | Speaker Ready Room
- 7:30 AM – 9:30 AM | Concurrent Technical Sessions 2
 - Session 2A: [Panel – Different States, Different Philosophies: How Western Regulators are Permitting Next-Generation Geothermal](#)
 - Session 2B: Superhot Rock
 - Session 2C: EGS II – Exploration, Play Fairways & Resource Design
 - Session 2D: Geology & Geophysical Characterization
 - Session 2E: Drilling I – Hard Rock, Bits & Performance
 - Session 2F: Low-Temperature & Direct Use I – Networks and Community Application
- 9:30 AM – 10:00 AM | Networking Break
- 9:30 AM – 8:30 PM | Exhibit Hall Open
- 10:00 AM – 12:00 PM | Concurrent Technical Sessions 3
 - Session 3A: [Panel – Money in Geothermal: Understanding Technology & Project Risk](#)
 - Session 3B: [Panel – The Wellbore is the Power Plant: Why Deep Closed-Loop Geothermal Changes Everything](#)
 - Session 3C: EGS III – Stimulation, Fracture Activation & Induced Seismicity
 - Session 3D: AI & Machine Learning I: Exploration and Geologic Characterization
 - Session 3E: Energy Conversion & Power Plant Performance
 - Session 3F: Communities & Workforce – Acceptance, Access and Industry Capacity
 - Session 3G: Drilling II – Automation, Thermal Management, Cost & Well Integrity
 - Session 3H: Next Gen Geo Workforce Development - The Importance of Early-Stage Geothermal Energy Education
- 10:30 AM – 12:30 PM | 2027 Early Booth Selection and Sponsor Sign-Up
- 12:00 PM – 1:30 PM | Networking Lunch
- 12:00 PM – 1:30 PM | Women in Geothermal (WING) Core Value Awards & Membership Meeting
- 2:00 PM – 4:00 PM | Plenary Session III: Today's Insights Driving Tomorrow's Geothermal Opportunities
- 4:00 PM – 4:30 PM | Networking Break
- 4:30 PM - 6:30 PM | Geothermal Hall of Fame and Awards Ceremony

- 4:30 PM – 6:30 PM | Concurrent Technical Sessions 4
 - Session 4A: [Panel - Co-Production of Geothermal Energy and Other Subsurface Resources](#)
 - Session 4B: AI & Machine Learning II: Data, Decision Support & Subsurface Modeling
 - Session 4C: EGS IV – Proppants, Tracers & Fracture Conductivity
 - Session 4D: Reservoir & Production Performance
 - Session 4E: Environmental, Land-Use & Stakeholder Considerations
 - Session 4F: Permitting & Policy – Deployment, Transmission & Regulatory Frameworks
- 6:30 PM – 8:30 PM | Technical Poster Hub
- 6:30 PM – 8:30 PM | Networking Reception in the Exhibit Hall
- 7:00 PM – 8:00 PM | GR Trivia Night

Wednesday, September 23

- 6:00 AM – 7:00 AM | Women in Geothermal (WING) Fun Run/Walk
- 7:00 AM – 12:00 PM | Registration & Information
- 7:00 AM – 2:00 PM | Speaker Ready Room
- 7:30 AM – 9:30 AM | Concurrent Technical Sessions 5
 - Session 5A: [Panel - What About Water? A Discussion on Next-Generation Geothermal Systems and Water, Including Technology Innovations, State-by-State Regulations, and Stakeholder Perceptions](#)
 - Session 5B: AI & Machine Learning III – Operations, Forecasting & Integrated Energy Systems
 - Session 5C: EGS V – Conformance Control & Flow Management
 - Session 5D: Closed-Loop Geothermal Systems
- 9:30 AM – 10:00 AM | Networking Break
- 9:30 AM – 1:30 PM | Exhibit Hall Open
- 10:00 AM – 12:00 PM | Concurrent Technical Sessions 6
 - Session 6A: [Panel - Connecting Geothermal to Data Centers: Practical Pathways to Integrate Geothermal Power in the AI Boom](#)
 - Session 6B: Well Construction, Completion & High-Temperature Integrity
 - Session 6C: EGS VI – Reservoir Modeling, Circulation & Thermal Performance
 - Session 6D: Low-Temperature & Direct Use II – Thermal Storage, Cooling & Borehole Systems
- 10:30 AM – 12:30 PM | 2027 GRC Early Booth Selection and Sponsor Sign-Up
- 12:00 PM – 1:30 PM | Networking Lunch

- 1:30 PM – 3:30 PM | Concurrent Technical Sessions 7
 - Session 7A: [Panel - Future of Geothermal in Texas and Gulf Coast: From Resource Potential to Commercial Reality](#)
 - Session 7B: Regional Updates
 - Session 7C: Logging, Monitoring & Instrumentation
 - Session 7D: Leveraging Oil & Gas for Geothermal
- 1:30 PM – 3:00 PM | Exhibitor Tear Down
- 3:30 PM – 4:30 PM | Closing Networking Break

Agenda subject to change.

**Additional fees apply for Field Trips, the Golf Tournament, and Workshops.*

 **Thank You To Our 2026 GRC Sponsors!**

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Detailed Technical Agenda

Plenary Sessions – Monday, September 21

Houston Ballroom 1-4 (2nd Floor)

8:00 AM – 10:00 AM | Opening Plenary Session: Big Vision, Big Energy, Big Geothermal Future

- Welcome Remarks | Jericho Reyes, GR Board of Directors
- State of the Geothermal Industry | Robin Zuza, Ormat & GR Board of Directors and David Townsend, TownRock Energy
- Welcome to Houston
- Keynote Remarks | Senator John Cornyn, TX
- Keynote Remarks | Lauren Boyd, Office of Geothermal, US DOE
- Keynote Remarks | Indigenous Community and Geothermal | Alissa Sanchez, Ormat
- Keynote Remarks | Geothermal Advancements and the Future of the Industry in Texas | Barry Smitherman, TxGEA
- Keynote Remarks | Al Vickers, XGS Energy
- Geothermal Capital & Investment Panel

Scaling geothermal deployment requires innovative financing, strategic partnerships, and increased investor confidence. This panel will bring together investors, developers, lenders, and industry leaders to discuss the evolving landscape of geothermal finance, including project funding, risk mitigation, emerging investment models, and opportunities across power generation, direct use, and thermal energy networks. Panelists will share insights into what attracts capital, how the investment community evaluates geothermal projects, and the pathways to accelerating growth across the industry.

Moderator: Torsten Kolind, Underground Ventures UGV

Panelists:

- *Liz Harnmeijer, EIG*
- *Jonathan Sisto, RBC*
- *Elizabeth Wolfe, US DOE EDF*
- Opening Plenary Session Emcee | Jonathan Hernandez, Brightcore Energy & GR Board of Directors

10:30 AM – 12:30 PM | Plenary Session II: A New Era for Geothermal Policy

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- Plenary II Welcome | Jericho Reyes, GR Board of Directors
- Geothermal Rising Policy Council Year-in-Review | Vanessa Robertson, Geothermal Rising
- Federal Policy Fireside Chat: The Administration's vision for geothermal and America's energy future. DOE and BLM leaders discuss why geothermal matters now, opportunities to accelerate deployment on federal lands, the role of innovation and investment, and what it will take to scale U.S. geothermal over the next five years.

Moderator: Lisa Epifani, ClearPath

Panelists:

- *Kyle Haustveit, Under Secretary, DOE*
- *Bill Groffy, Principal Deputy Director, BLM*

- Federal Legislation Panel

Moderator: Caity Smith, XGS Energy & GR Board of Directors

Panelists:

- *Jeff Crater, Quaise*
- *Bruce Kohn, TLS Geothermics & GR Board of Directors*
- *Zach Millimet, Darcy Solutions*

- Special Announcement!
- State-Level Policy Updates | Michael O'Connor, Mountain West Geothermal Consortium
 - Mountain West Geothermal Consortium Director Mike O'Connor will introduce the newly-formed organization and its purpose, touching on why the Consortium is focused on state policy aimed at unlocking finance for geothermal projects, as well as access to subsurface data.
- Plenary Session II Emcee | Caity Smith, XGS Energy & GR Board of Directors

1:00 PM-2:00 PM | GR Mentor-Mentee Meetup | Texas Ballroom (4th Floor)

Are you looking for an experienced geothermal professional to discuss ideas with, answer career questions, or help you think through your next academic or professional step? Join us for lunch on Monday and meet accomplished professionals from the geothermal industry and academia. Each mentor will give a one-minute introduction covering their background, expertise, and career experience. Students can then connect with mentors whose interests and experience best match their goals. The meetup is intended to provide practical advice, expand professional networks, and create mentoring relationships that continue throughout the conference and beyond.

Plenary Session – Tuesday, September 22

Houston Ballroom 1-4 (2nd Floor)

2:00 PM - 4:00 PM | Plenary Session III: Today's Insights Driving Tomorrow's Geothermal Opportunities

- **Thermal Energy Networks (TENs) Development**

Thermal Energy Networks (TENs) are emerging as a scalable, efficient solution for decarbonizing buildings and communities through shared geothermal infrastructure. Additionally, TENs accelerate the geothermal industry by integrating diverse technologies, such as advanced closed-loop (ACL) systems and ground-source heat pumps. This panel will explore the planning, design, financing, and implementation of TENs, highlighting successful projects, policy developments, utility engagement, and innovative business models. Industry experts will discuss the opportunities and challenges of expanding thermal networks and the collaborations needed to accelerate their adoption.

Moderator: Joshua Soble, Green Therma & GR Board of Directors

Panelists:

- *Daniel Flaherty, CDM Smith*
- *Professor Adam Hawkins, Clemson University*
- *Zeyneb Magavi, HEET*
- *Giovanni Sosio, SLB*

- **Next Generation Geothermal Panel**

As demand for reliable, clean energy accelerates, next-generation geothermal technologies are transforming how geothermal resources are discovered, developed, and deployed. This panel will explore emerging innovations—including enhanced geothermal systems (EGS), advanced drilling technologies, closed-loop systems, thermal energy networks, digital solutions, and new financing approaches—that are expanding geothermal's reach into new markets. Industry leaders will discuss lessons learned from pioneering projects, the technical and regulatory challenges ahead, and the collaborations needed to scale geothermal as a cornerstone of the global energy transition.

Moderator: Matt Houde, Quaise & GR Board of Directors

Panelists:

- *Koenraad Beckers, Birch*
- *Spencer Jackson, Critical Energy*
- *Ghazal Izadi, XGS Energy*
- *Florent Rousset, Baker Hughes*

- **Geothermal Rising Membership Update**
 - Jericho Reyes, President of the Board, Geothermal Rising
 - Kerry Fellers, Geothermal Rising

- **Canada's Geothermal Opportunity: From Roadmap to Market**

Canada is building its first national Deep Geothermal Roadmap, creating new momentum around the country's geothermal potential. This panel will explore how Canada can leverage its world-class drilling and subsurface expertise, energy workforce, Indigenous partnerships, and growing demand for reliable power and heat to move geothermal projects from opportunity to deployment—and what regulatory, financing, and market barriers still need to be addressed.

Moderator: Lisa Mueller, FutEra Power Corp & GR Board of Directors

Panelists:

- *Neil Ethier, Eavor*
- *Leighton Gall, Altitude*
- *Peter Massie, Cascade Institute*
- *Kasturi Narayanan, Consulate of Canada*

- Plenary Session Emcee: Rochelle Longval, Hephæ Energy Technology & GR Board of Directors

4:30 PM - 6:30 PM | Geothermal Hall of Fame and Awards Ceremony

The Geothermal Hall of Fame and Awards Ceremony isn't just any gathering—it's a chance for YOU to recognize the driving force of our dynamic association – the GR community members that are making a positive difference, conducting cutting-edge research, and leading the charge in the advancement of geothermal energy! Join fellow members from across the globe as we recognize these individuals' accomplishments.

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Technical Poster Hub Sessions | Texas Ballroom Foyer (4th Floor)

Sunday, September 20, 6:30 PM – 8:30 PM | Technical Poster Hub I

Student Posters

- Physics-Guided ML Screening of Thermal-Shock Damage from Micro-CT and Sonic Data | Touka Elsayed
- Integrated Machine Learning Framework for Rate of Penetration Prediction in Geothermal Drilling: Combining Operational and Geomechanical Data | Ernest Owusu
- Evaluating the Influence of Layered Heterogeneity on Subsurface Heat Transfer via a Novel Transfer Matrix Approach | Junyuan Zhang
- Evaluation of Engineered Zeolites as Solid-Phase Tracers under Utah FORGE Conditions: Modified API 19D Flow-Through and Hydrothermal Tests | Bruce Mutume
- Hydrothermal and Mechanical Stability of Proppant Materials under Long-Term Enhanced Geothermal System Conditions | Bruce Mutume
- Optimizing CFD-DEM Proppant Settling Under High-Pressure and High-Temperature Conditions using Physics-Informed Neural Operators (PINOs) | Israel Momoh
- Nanoparticle-Reinforced Epoxy Systems for Thermally Stable Coatings in Enhanced Geothermal Environments | Bruce Mutume
- Co Production of Natural Gas and Geothermal Energy in Geopressured Geothermal Systems | Kartik Mawa
- PDC Drill Bit Performance Under Different High Temperature Drilling Scenarios | Asad Safarov
- Integrated Fracture Network and Lineament Analysis for Identifying Potential Geothermal Fluid Pathways in the Guguan Area, Central Taiwan | Ming-Yu Wu
- Renewed Measurements of Thermal Water Discharge at the Steamboat Hills Geothermal System Following Recent Changes in Hydrothermal Surface Features | Tyler Irvin
- Integrated Study of a Potential Hidden Geothermal System, northeastern Reese River Valley, north-central Nevada | Nada Mareechi Jacinto
- Performance Evaluation of Shallow Geothermal Cooling Systems in Hot and Arid Regions Using Large-Scale 3D Numerical Modeling | Mani Rambothu
- Characterizing the Exergy Crossover for Cascaded Geothermal Electricity and Agricultural Heat Recovery: A Williston Basin Case Study | Houdaifa Khalifa
- A Probabilistic Economic Framework for Geothermal Drilling Cost Quantification Using Markov Chain Monte Carlo Simulation | Tariq Al Qais
- Can Idle Wells Power the Energy Transition? Evaluating Geothermal Co-Production Viability Across the United States | Jane Onu
- Unlocking Hawai'i's Geothermal Potential: Policy, Finance, and Pathways to Firm Renewable Energy | Anu Kadyan

Monday, September 21, 12:30 PM – 2:30 PM | Technical Poster Hub II

EGS, Drilling and Well Design I

- Hydraulic Turbocharger Integration in Pump-Driven Geothermal ORC Systems | Eli Oklejas
- Co-Production of Natural Gas and Geothermal Energy in Geopressured Geothermal Systems | Kartik Mawa
- Multiphase Flowmeter for Real-Time In-line Monitoring of Geothermal Well Production of Steam and Brine 2-Phase Flow | Linyuan Zhan

- Geothermal Project Planning Supported by Full-Scale Laboratory Drilling Simulation | John Bomidi
- Use of Horizontal Multistage Pumps for Geothermal Injection | John Davis
- Design, Development, and Testing of Downhole Directional Pulse Descaling System | Shang Chian Chen
- How Expandable Liners Can Be Used to Restore Casing Integrity in Geothermal Wells | Matthew Roush

Geological Characterization, Regional Assessment, Exploration

- Customizing Handheld XRF Calibrations for Characterizing Complex Igneous and Metamorphic Lithologies in a Geothermal System; Example from the Milford, UT FORGE Site. | Austin Morrell
- Integrated Fracture Network and Lineament Analysis for Identifying Potential Geothermal Fluid Pathways in the Guguan Area, Central Taiwan | Ming-Yu Wu
- Member-Specific Probabilistic Assessment of Geothermal Energy Resources in the Marcellus Shale, Pennsylvania | Taylan Ozgur Yildirim
- Statistical Evaluation of Favorable Structural Settings as Predictors of Geothermal Systems in the Great Basin | James Faulds
- Investigating Geothermal Brine as a Potential Lithium Resource at Wendover Graben in the Great Salt Lake Desert, Utah | Hannah Gatz-Miller
- Regional Temperature Mapping and Uncertainty Quantification for Geothermal Resource Assessment in Onshore and State Waters of Texas | Bissett Young
- Assessing Geothermal Resource Potential in West Virginia using Equilibrated Borehole Temperatures and Curie-point Depth Mapping | John Barton
- Renewed Measurements of Thermal Water Discharge at the Steamboat Hills Geothermal System Following Recent Changes in Hydrothermal Surface Features | Tyler Irvin
- Integrated Study of a Potential Hidden Geothermal System, northeastern Reese River Valley, north-central Nevada | Nada Mareechi Jacinto
- 3D Geologic Map of the Jersey Summit Area in Southern Buffalo Valley and Northern Jersey Valley, Nevada | Tait Earney
- Uncovering the potential for geothermal energy of the Frio Formation, onshore Texas, USA | Carlos Uroza
- Geothermal Resource Assessment and Technologies for Heat Extraction from Salt Domes in the Gulf Coast of Texas | Shuvajit Bhattacharya

Direct Use, GSHP, Utilization

- Performance Evaluation of Shallow Geothermal Cooling Systems in Hot and Arid Regions Using Large-Scale 3D Numerical Modeling | Mani Rambothu
- Characterizing the Exergy Crossover for Cascaded Geothermal Electricity and Agricultural Heat Recovery: A Williston Basin Case Study | Houdaifa Khalifa
- Assessing Geothermal Cooling Pathways for Sustainable Thermal Management in Data Centers and Cooling-Intensive Applications | Yusuf Kundakci
- Performance of the First Year of Operations of the Framingham Geothermal Energy Network | Isabel Varela Gutierrez
- Cool Under Pressure: Thermal Management with Gypsum-Graphite Composites | Hortencia Torres

Tuesday, September 22, 6:30 PM – 8:30 PM | Technical Poster Hub III

AI and Machine Learning

- Well-Aware Imputation Of Missing DTS (Sonic Shear Slowness) Curves Using Machine Learning: A Case Study On The WAID Dataset | Ahmed Saad
- A Dual Machine-Learning Framework for Multi-Criteria Screening of Geothermal Favorability | Stuart Skopec
- Physics-Guided ML Screening of Thermal-Shock Damage from Micro-CT and Sonic Data | Touka Elsayed
- Integrated Machine Learning Framework for Rate of Penetration Prediction in Geothermal Drilling: Combining Operational and Geomechanical Data | Ernest Owusu

Reservoir Modeling

- Modeling Thermal Evolution: A Lifecycle Approach to Temperature Gradients of Enhanced Geothermal Systems | Lijun Song
- Improving Geothermal Off-design Power Cycle Performance Modeling in the System Advisor Model | Ty Neises

EGS, Drilling and Well Design II

- Qualification Testing for Subsurface Use of a Next Generation EGS Fracturing and Conformance Control System | William Fleckenstein
- Microseismicity from Geothermal Stimulations Illuminates Fault Systems at Cape Station, Utah | Shanna Chu
- Hydrothermal and Mechanical Stability of Proppant Materials under Long-Term Enhanced Geothermal System Conditions | Bruce Mutume
- Evaluation Framework for Unsupervised Anomaly Detection in EGS Injection Operations: A Comparative Point-wise and Fracture Stage-Level Analysis of Multi-Stage Hydraulically Fractured Wells | Silver Damigoru
- The Potential for Enhanced Geothermal Systems in Tight Sandstones of the Gulf Coast | Shuvajit Bhattacharya
- Optimizing CFD-DEM Proppant Settling Under High-Pressure and High-Temperature Conditions using Physics-Informed Neural Operators (PINOs) | Israel Momoh
- Assessment of Drilling Feasibility and Casing Integrity for Multilateral Closed-Loop Geothermal Wells | Riku Nakaya
- Application of Advanced Flow Control Devices (AFCDs) for Scaling Mitigation and Thermal Sweep Optimization in Geothermal Wells Using Integrated Solubility Modeling | Morteza Akbari
- PDC Drill Bit Performance Under Different High Temperature Drilling Scenarios | Asad Safarov

Strategy, Policy, Economics

- Geothermal as a Strategic Asset for U.S. Energy Dominance | J Michael Grappone
- Reliability-Adjusted Carbon Intensity and the Economic Value of Geothermal Power Under Emerging Carbon Accounting Frameworks | Peter Psarras
- A Probabilistic Economic Framework for Geothermal Drilling Cost Quantification Using Markov Chain Monte Carlo Simulation | Tariq Al Qais

- Can Idle Wells Power the Energy Transition? Evaluating Geothermal Co-Production Viability Across the United States | Jane Onu
- Unlocking Hawai‘i’s Geothermal Potential: Policy, Finance, and Pathways to Firm Renewable Energy | Anu Kadyan

Environmental Impacts and Outreach; Above Ground Challenges

- Updated Geothermal Disturbance Impacts on Public Lands | Jesse Cruce
- From Subsurface Exploration to Public Engagement: Designing a National Geothermal Exhibition in Taiwan to Bridge Science, Society, and Energy Transition | Gongruei Ho



Concurrent Technical Sessions – Monday, September 21

3:00 PM – 5:00 PM | Concurrent Sessions 1

Session 1A: Panel - New Tax Rules, New Development Opportunities: Doing Business in Indian Country | Houston Ballroom 5 (2nd Floor)

In December 2025, the U.S. Department of Treasury issued new rules clarifying how the Internal Revenue Code governs how Tribes and those who do business in Indian Country are taxed, eliminating decades-long confusion. Gone are the days of double-taxation with states. This panel will clarify the new tax rules and promises to be a lively and enthusiastic discussion.

Moderator: Jessica Eagle-Bluestone, Geothermal Rising

Panelists:

- *Fatima Abbas, US Department of Treasury*
- *Wendolyn Holland, Foundation for the NLR*

Session 1B: Special Session: Texas Imperative of Geothermal Resources | Houston Ballroom 6 (2nd Floor)

- 3:00 PM - 3:20 PM | Screening Oil and Gas Wells in the Gulf Coast and East Texas for Geothermal Development Using Fluid Production, Fluid Composition, and Temperature Data | Presenting Author: Kartik Mawa
- 3:20 PM - 3:40 PM | Old Play, New Potential for Geothermal Resources: Wilcox Onshore Texas | Presenting Author: Mariana Olariu
- 3:40 PM - 4:00 PM | Enhanced Geothermal in Sedimentary Basins: Geomechanical Considerations with Examples from the Texas Gulf Coast | Presenting Author: Peter Eichhubl
- 4:00 PM - 4:20 PM | Geothermal Play Fairway Mapping of Texas Gulf Coast Formations | Presenting Author: Shuvajit Bhattacharya

Session 1C: EGS I - Deployment, Monitoring & Integrated Applications | Houston Ballroom 7 (2nd Floor)

- 3:00 PM - 3:20 PM | Integrating ORC Power Generation and Lithium Recovery in U.S. Next-Generation Geothermal Systems: Insights from United Downs Project | Presenting Author: Davide Elia Lattuada
- 3:20 PM - 3:40 PM | Characterizing the Exergy Crossover for Cascaded Geothermal Electricity and Agricultural Heat Recovery: A Williston Basin Case Study | Presenting Author: Houdaifa Khalifa
- 3:40 PM - 4:00 PM | Beyond Peak-Day Planning: A Multi-Day Stochastic Capacity Expansion Analysis of Enhanced Geothermal Systems | Presenting Author: J Michael Grappone
- 4:00 PM - 4:20 PM | Performance Evaluation of Shallow Geothermal Cooling Systems in Hot and Arid Regions Using Large-Scale 3D Numerical Modeling | Presenting Author: Mani Rambothu
- 4:20 PM - 4:40 PM | High-Temperature Downhole Seismometer for Near-Field Microearthquake Monitoring in Geothermal Reservoirs | Presenting Author: Nori Nakata
- 4:40 PM - 5:00 PM | Integrated Seismic Monitoring during 2025 Reservoir Stimulations at the Newberry EGS Field, Oregon | Presenting Author: Nori Nakata

Session 1D: Above-Ground Operations & Power Plant Equipment | Meyerland (3rd Floor)

- 3:00 PM - 3:20 PM | Reducing air quality impacts from geothermal venting with meteorological decision support | Presenting Author: Jeff Beamish
- 3:20 PM - 3:40 PM | Use of Horizontal Multistage Pumps for Geothermal Injection | Presenting Author: John Davis
- 3:40 PM - 4:00 PM | Geothermal Non-Condensable Gas Treatment - Technologies for Changing Regulatory Environments | Presenting Author: Kenneth McIntush
- 4:00 PM - 4:20 PM | Elimination of Condenser Hot Well Level Instability | Presenting Author: Richard Rochford
- 4:20 PM - 4:40 PM | Hydraulic Turbocharger Integration in Pump-Driven Geothermal ORC Systems | Presenting Author | Presenting Author: Eli Oklejas
- 4:40 PM - 5:00 PM | Weld Repair of Geothermal Steam Turbine Rotors | Presenting Author: Vamadevan Gowreesan

Session 1E: Economics, Finances & Project Value | Briar Grove (3rd Floor)

- 3:00 PM - 3:20 PM | Geothermal Power Cost Estimations and Supply Curves based on the SAM-reV Workflow | Presenting Author: Dayo Akindipe
- 3:20 PM - 3:40 PM | Geothermal Project Planning Supported by Full-Scale Laboratory Drilling Simulation | Presenting Author: Michael Savage
- 3:40 PM - 4:00 PM | Reliability-Adjusted Carbon Intensity and the Economic Value of Geothermal Power Under Emerging Carbon Accounting Frameworks | Presenting Author: Peter Psarras
- 4:00 PM - 4:20 PM | How Next-Gen Geothermal Financing is Evolving at the Level of Innovation Clusters, Firms, and Technologies | Presenting Author: Torsten Kolind
- 4:20 PM - 4:40 PM | Development of a Bottom-Up Hydraulic Fracturing Cost Model for Enhanced Geothermal Systems | Presenting Author: Sajjan Pokhrel

Session 1F: Geochemistry & Critical Minerals | Kingwood (3rd Floor)

- 3:00 PM - 3:20 PM | Assessing the Efficacy of a Silica Inhibitor in a Two-Phase Production Well: Modeling Workflow and Field Studies at Steamboat Production Well 24-5 | Presenting Author: Amit Reiss
- 3:20 PM - 3:40 PM | Customizing Handheld XRF Calibrations for Characterizing Complex Igneous and Metamorphic Lithologies in a Geothermal System; Example from the Milford, UT FORGE Site | Presenting Author: Austin Morrell
- 3:40 PM - 4:00 PM | Striving for Accuracy in the Analysis of Chalcophile Elements in Complex Lithologies: Pitfalls and Practical Solutions Using Portable ED-XRF | Presenting Author: Harry Rowe
- 4:00 PM - 4:20 PM | Scaling, Corrosion, and Thermal Performance Assessment for Geothermal-Lithium Co Production in Saline Formations | Presenting Author: Ram Kumar
- 4:20 PM - 4:40 PM | Predicting fluid composition and mineralogical changes in stimulated geothermal systems of the Basin and Range, Nevada | Presenting Author: Sabine Mehay
- 4:40 PM - 5:00 PM | Water use requirements for lithium adsorption and from Salton Sea Geothermal Brine | Presenting Author: Lauren MacDonald

7:00 PM – 9:00 AM | Monday Night Mixer

Join us Monday night for an unforgettable evening of networking with fellow geothermal professionals, industry leaders, and friends at the Houston Museum of Natural Science. Mix and mingle while exploring the Energy Exhibit and one of the finest paleontology collections in the United States, and be sure to visit the silent auction for your chance to win something special. It's the perfect opportunity to make new connections, enjoy an incredible setting, and experience a little of what makes Houston such a great host city for GRC.

Sponsored by:



Concurrent Technical Sessions – Tuesday, September 22

7:30 AM – 9:30 AM | Concurrent Sessions 2

Session 2A: Panel - Different States, Different Philosophies: How Western Regulators are Permitting Next-Generational Geothermal | Houston Ballroom 5 (2nd Floor)

As geothermal investment grows and a new generation of companies are expanding the map of potential projects, state regulators are increasingly being asked to evaluate projects that do not fit neatly within traditional geothermal, water, mining, or oil and gas regulatory frameworks. Across the Western United States, states are taking different approaches to balancing innovation, resource development, water protection, public confidence, and regulatory certainty. Some states are building upon decades of conventional geothermal experience. Others are adapting oil and gas frameworks, while some are developing entirely new approaches for emerging geothermal technologies. And many aren't sure where to start. This regulator-focused panel will bring together senior state officials from leading geothermal states to discuss how their agencies are approaching permitting, what challenges they are encountering, and how regulatory frameworks may evolve as the industry scales. Particular attention will be paid to water permitting, groundwater protection, injection oversight, and interagency coordination.

Moderator: Dina Goloshchapova, CARBO

Panelists:

- *Dustin Holcomb, Nevada Division of Minerals*
- *Michael Rigby, Colorado Energy and Carbon Management*
- *Jared Ware, Railroad Commission of Texas*

Session 2B: Superhot Rock | Houston Ballroom 6 (2nd Floor)

- 7:30 AM - 7:50 AM | Thermal Conductivity Benchmarking of Hybrid Titanium Tubulars for Superhot Geothermal Wells | Presenting Author: Gregory Walz
- 7:50 AM - 8:10 AM | Well Integrity Analysis under Imperfect Cementing Conditions in Supercritical Well | Presenting Author: Mohmad Mohsin Thakur
- 8:10 AM - 8:30 AM | Exploration on Newberry Volcano in support of a Superhot EGS project | Presenting Author: Trenton Cladouhos
- 8:30 AM - 8:50 AM | Hydrothermal phase-engineered calcium aluminate cement composite for geothermal well sealing above 300 °C | Presenting Author: Zhuochen Zhan

Session 2C: EGS II - Exploration, Play Fairways & Resource Design | Houston Ballroom 7 (2nd Floor)

- 7:30 AM - 7:50 AM | Establishment of Play Types for EGS Exploration | Presenting Author: Drew Siler
- 7:50 AM - 8:10 AM | A Play-Risk Analysis Framework for Enhanced Geothermal Systems: Application to the Western Utah Basin and Range | Presenting Author: Kellen Gunderson
- 8:10 AM - 8:30 AM | Enhancing Geothermal Exploration Success: Leveraging Geothermal Play Fairway Analysis to Target Anomalous Heat Mechanisms and Optimize Gradient Predictions | Presenting Author: Kevin McCarthy
- 8:30 AM - 8:50 AM | Geothermal Matchmaking: Coupling Resources and Reservoir Design | Presenting Author: Luke Frash
- 8:50 AM - 9:10 AM | Technical Potential of Geothermal Power at Manufacturing Facilities in the United States | Presenting Author: Nicole Harvey
- 9:10 AM - 9:30 AM | Distribution of induced seismicity along lithological boundaries | Presenting Author: Eva Schill

Session 2D: Geology & Geophysical Characterization | Meyerland (3rd Floor)

- 7:30 AM - 7:50 AM | Subsurface Characterization of Deep Permeable Formations for Geologic Seawater Air Conditioning (GeoSWAC) System in Miami, Florida | Presenting Author: Estefanny Davalos Elizondo
- 7:50 AM - 8:10 AM | 1D Toughreact THC Model at Newberry Volcano: Superhot Rock EGS Reservoir Assessment | Presenting Author: Geoffrey Mibei
- 8:10 AM - 8:30 AM | Synergies Between Conventional and Unconventional Geothermal Plays and Implications for Regional Assessments: Perspectives from the Great Basin Region, Western USA | Presenting Author: James Faulds
- 8:30 AM - 8:50 AM | Integrated Fracture Network and Structural Analysis for Identifying Potential Geothermal Fluid Pathways in the Guguan Area, Central Taiwan | Presenting Author: Ming-Yu Wu
- 8:50 AM - 9:10 AM | Results of Temperature Gradient Drilling into East Maui Volcano, Hawaii, USA | Presenting Author: Nicole Lautze
- 9:10 AM - 9:30 AM | Heat-Sweep Monitoring Using Bubbled-Water Seismic Imaging | Presenting Author: Qiuliang Yao

Session 2E: Drilling I - Hard Rock, Bits & Performance | Briar Grove (3rd Floor)

- 7:30 AM - 7:50 AM | Physics-Informed Automated Bit Forensics: Linking 3D Cutter Reconstruction to Drill Bit Performance Prediction in Geothermal Drilling | Presenting Author: Asad Safarov
- 7:50 AM - 8:10 AM | Geothermal in France: Setting A New Benchmark in Granite Drilling | Presenting Author: Barzin Chiniwala
- 8:10 AM - 8:30 AM | What Maximum Formation Temperature Can Be Reached in a Drilling Test Site with Insulated Drill Pipe and Mud Chiller | Presenting Author: Guizhong Chen
- 8:30 AM - 8:50 AM | Field Demonstration of Downhole Anchoring and Drive System in Hard Crystalline Rock: Results from a Norwegian Test Well | Presenting Author: Miles Walker
- 8:50 AM - 9:10 AM | Optimizing ROP and Bit Wear in Granitic Geothermal Drilling Using Field Data | Presenting Author: Mohammed Al Dushaishi
- 9:10 AM - 9:30 AM | First Deployment of Hybrid Drill Bit in Philippines | Presenting Author: Siti Aishah Mohd Rozaidin

Session 2F: Low-Temperature & Direct Use I - Networks and Community Application | Kingwood (3rd Floor)

- 7:30 AM - 7:50 AM | Quantifying the Ambient Thermal Energy Opportunity - A Case Study for Massachusetts | Presenting Author: Archana Dayalu
- 7:50 AM - 8:10 AM | A Boise case study: data-driven planning for thermal energy networks | Presenting Author: Joshua Thumim
- 8:10 AM - 8:30 AM | Strengthening Indonesia's Energy Transition: The Kanyaah Integrated Direct-Use Model (KIDM) for Community-Based Agri-Aquaculture and Local Energy Security, from PT Pertamina Geothermal Energy | Presenting Author: Erwandi Yanto
- 8:30 AM - 8:50 AM | Design Considerations for Expanding Geothermal Networks Beyond the First Loop - A Case Study from Framingham, Massachusetts | Presenting Author, Isabel Varela
- 8:50 AM - 9:10 AM | Low Carbon Geothermal Energy - Geoheat in New Zealand | Presenting Author: Mark Gibson
- 9:10 AM - 9:30 AM | Exploring the transition dynamics of geothermal energy network implementation | Presenting Author: Nicholas Fry

10:00 AM – 12:00 PM | Concurrent Sessions 3

Session 3A: Panel - Money in Geothermal: Understanding Technology & Project Risk | Houston Ballroom 5 (2nd Floor)

Next-generation geothermal technologies are advancing to commercial scale, and require new financing mechanisms that align with evolving project risks. This panel brings together experts from finance, technology development, project execution and subsurface engineering to explore how geothermal projects become investable and bankable. Panelists will discuss the risks that matter most to investors and lenders, the technical milestones that build confidence, the role of demonstration projects and data, and how project teams can translate subsurface uncertainty into financeable opportunities.

Moderator: Jason Lipton, Clean Air Task Force

Panelists:

- *Soraya Bornaz, Underground Ventures*
- *John McLennan, Energy & Geoscience Institute, University of Utah*
- *Jonathan Verlander, Baseload*
- *Randal Wichuk, Teverra*

Session 3B: Panel - The Wellbore is the Power Plant: Why Deep Closed-Loop Geothermal Changes Everything | Houston Ballroom 6 (2nd Floor)

For over a century, geothermal energy has followed one premise: find hot fluid, bring it to surface, generate power. Conventional hydrothermal systems depend on the geological lottery of permeable reservoirs and favorable fluid chemistry. Enhanced Geothermal Systems attempted to engineer that permeability — but stimulation uncertainty, induced seismicity concerns, and water consumption have constrained their commercial trajectory. The result is a geothermal industry that, despite its enormous resource base, has remained geographically confined and difficult to scale.

Moderator: Alexis Garcia, NOV

Panelists:

- *Patricia Scroggin-Wicker, Burns & McDonnell*
- *Lance Sollohub, XGS*
- *Matt Toews, Eavor Technologies Inc.*
- *Stephanie Vetsch, EAPOSYS*

Session 3C: EGS III - Stimulation, Fracture Activation & Induced Seismicity | Houston Ballroom 7 (2nd Floor)

- 10:00 AM - 10:20 AM | Hydraulic Fracturing Experimental Study of High-Temperature Granite with Water and Supercritical Carbon Dioxide | Presenting Author: Zheng Jiang
- 10:20 AM - 10:40 AM | Impact of Injection Design and Sequential Stimulation on Fracture Activation and Induced Seismicity - A Case Study of Stages 8-10 at Utah FORGE | Presenting Author: Nicolas Cardenas Acevedo
- 10:40 AM - 11:00 AM | Hydraulic Fracture Versus Natural Fracture Dominance in Multi-Stage Hydraulic Stimulations at Utah FORGE | Presenting Author: Pengju Xing
- 11:00 AM - 11:20 AM | Microseismicity from geothermal stimulations illuminates fault systems at Cape Station, Utah | Presenting Author: Shanna Chu
- 11:20 AM - 1:40 AM | Mitigating Induced Seismicity in Enhanced Geothermal Systems (EGS): Rate Strategies under Coupled Poroelastic and Fluid Pressure Effects | Presenting Author: Yuan Tian

Session 3D: AI & Machine Learning I: Exploration and Geological Characterization | Meyerland (3rd Floor)

- 10:00 AM - 10:20 AM | A Machine Learning-Based Fracture Network Application for Geothermal Sweet Spot Identification in the Basin and Range Province | Presenting Author: Gavin Liu
- 10:20 AM - 10:40 AM | Geothermal System Characterization using Machine Learning Approaches | Presenting Author: Jonghyun Lee

- 10:40 AM - 11:00 AM | Subsurface Temperature Mapping using Google AlphaEarth | Presenting Author: Nori Nakata
- 11:00 AM - 11:20 AM | A Dual Machine-Learning Framework for Multi-Criteria Screening of Geothermal Favorability | Presenting Author: Stuart Skopec
- 11:20 AM - 11:40 AM | Physics-informed AI Geothermal prospectivity | Presenting Author: Velimir Vesselinov
- 11:40 AM - 12:00 PM | Transferable AI for Geothermal Exploration: Mapping Favorability Across Various Geological Settings | Presenting Author: Zeynep Aydar

Session 3E: Energy Conversion & Power Plant Performance | Briar Grove (3rd Floor)

- 10:00 AM - 10:20 AM | Technoeconomic Analysis of Alternative Cooling Strategies for Geothermal Power Plants | Presenting Author: Mira Goldstein
- 10:20 AM - 10:40 AM | Innovative Air-Cooled Condenser Bundle Design for Organic Rankine Cycle Applications - Field test results | Presenting Author: Joseph Bonafin
- 10:40 AM - 11:00 AM | Diurnal and Seasonal Impacts on the Performance of an ORC Power Plant Coupled with an EGS: A Physics-Based Digital Twin for Utah FORGE | Presenting Author: Md Faisal Karim
- 11:00 AM - 11:20 AM | Application of Radial Inflow Turbine, Turboexpander, as a Topping Back Pressure Turbine in Geothermal Flash Power Plant | Presenting Author: Reza Agahi
- 11:20 AM - 11:40 AM | Effect of Well Configuration on Performance of Reservoir Thermal Energy Storage in Improving Grid Stability | Presenting Author: Shuvajit Bhattacharya
- 11:40 AM - 12:00 PM | Techno-Economic Assessment of Seasonal Reservoir Thermal Storage System in Grimes County, Texas, for Cooling Purposes | Presenting Author: Yuxing Wu

Session 3F: Communities & Workforce - Acceptance, Access and Industry Capacity | Kingwood (3rd Floor)

- 10:00 AM - 10:20 AM | Social Acceptance of Geothermal Systems Across Contrasting Energy Landscapes: Evidence from California and Texas | Presenting Author: Carlos Gorraez Meraz
- 10:20 AM - 10:40 AM | Geothermal exploration in dense urban environments: Case study from Melilla, Spain | Presenting Author: Daniel Alonso Torres
- 10:40 AM - 11:00 AM | Beyond the Resource, Geothermal Energy and the Social Imperative | Presenting Author: Amelia Letvin
- 11:00 AM - 11:20 AM | Modernizing the use of Geographic Information Systems (GIS) in the Geothermal Industry - the Ormat Case Study | Presenting Author: Courtney Brailo

Session 3G: Drilling II - Automation, Thermal Management, Cost & Well Integrity | River Oaks (3rd Floor)

- 10:00 AM - 10:20 AM | From Pilot to Full-Scale: A Roadmap for Autodriller Adoption in Geothermal Drilling | Presenting Author: Brian Christianoro
- 10:20 AM - 10:40 AM | INGENIOUS Project Thermal Gradient Hole Drilling: Tales from the road to getting measurements of temperature at depth | Presenting Author: Mary Mann
- 10:40 AM - 11:00 AM | Automatic Temperature Management for Deep Geothermal Drilling: A Systems Engineering Framework for Realtime Operations | Presenting Author: Naveen Velmurugan
- 11:00 AM - 11:20 AM | A Probabilistic Economic Framework for Geothermal Drilling Cost Quantification Using Markov Chain Monte Carlo Simulation | Presenting Author: Tariq Al Qais
- 11:20 AM - 11:40 AM | Network-Controlled Fiber Sealing in Fractures: Implications for Geothermal Well Integrity | Presenting Author: Zhengxun Hui

Session 3H: NextGen Geo Workforce Development - The Importance of Early-Stage Geothermal Energy Education | Hunter's Creek (3rd Floor)

10:00 AM-12:00 AM Join us before lunch for a dynamic Next Gen Geo panel on “The Importance of Early-Stage Geothermal Energy Education.” Designed for high school students, undergraduate and graduate students, recent graduates, educators, and geothermal professionals, the session will examine how early exposure, clear educational pathways, knowledge sharing, and workforce training can prepare the next generation for careers in geothermal energy. Panelists will share perspectives and practical experiences, followed by discussion and interactive activities that encourage greater industry involvement in education, outreach, and talent development.

Moderator: Caleb Darko, Student Committee GRC Meeting Co-Chair

Panelists:

- *Shari Kelley, Senior Geophysicist/Field Geologist at New Mexico Bureau of Geology*
- *Christopher Katis, Marketing Communications Specialist for the Utah FORGE Project*
- *Vanessa Robertson, Director of Policy and Education Geothermal Rising*
- *Malcom Ross, Adjunct Faculty, Rice University*

4:30 PM – 6:30 PM | Concurrent Sessions 4

Session 4A: Panel - Co-Production of Geothermal Energy and Other Subsurface Resources | Houston Ballroom 5 (2nd Floor)

This panel assembles experts to discuss the integration of geothermal energy recovery into existing energy extraction or storage efforts, additional resources that may be recovered as part of geothermal developments, and new co-production concepts.

Participants have a range of expertise in petroleum systems, natural hydrogen, critical minerals in brines, and storage of CO₂ and energy fluids.

This panel represents a collaboration between Geothermal Rising and the American Association of Petroleum Geologists Energy Mineral Division Geothermal Resources Committee.

Moderator: Justin Birdwell, USGS

Panelists:

- *Bulbul Ahmmed, LANL*
- *Ben Burke, Gradient Geothermal*
- *Geoffrey Ellis, Stanford University*
- *Karen Lechtenberg, Advanced Resources International*
- *Will Osborn, Controlled Thermal Resources*

Session 4B: AI & Machine Learning II: Data, Decision Support & Subsurface Modeling | Houston Ballroom 6 (2nd Floor)

- 4:30 PM - 4:50 PM | Well-Aware Imputation Of Missing DTS (Sonic Shear Slowness) Curves Using Machine Learning: A Case Study On The WAID Dataset | Presenting Author: Ahmed Saad
- 4:50 PM - 5:10 PM | Improving Geothermal Data Discovery: Integrating Geospatial Search and Data Previews into the Geothermal Data Repository | Presenting Author: Jon Weers
- 5:10 PM - 5:30 PM | Assessing a Value of Information Framework for Informing Geothermal Data Collection Efforts in Hawaii | Presenting Author: Nicole Taverna
- 5:30 PM - 5:50 PM | Building 3D Geologic Models with LLM's & Open-source Software | Presenting Author: Whitney Trainor-Guitton
- 5:50 PM - 6:10 PM | Physics-Guided ML Screening of Thermal-Shock Damage from Micro-CT and Sonic Data | Presenting Author: Touka Elsayed
- 6:10 PM - 6:30 PM | Geothermal Prospectivity and Machine Learning Based Approach for Lithium Prediction in the Smackover Formation | Presenting Author: Emmanuel Agyei

Session 4C: EGS IV - Proppants, Tracers & Fracture Conductivity | Houston Ballroom 7 (2nd Floor)

- 4:30 PM - 4:50 PM | Tracking Geothermal Fronts: Integrated Evaluation of Engineered Zeolite Particle Tracers via Modified API 19D Fracture Conductivity and Geochemical Durability Testing | Presenting Author: Bruce Mutume
- 4:50 PM - 5:10 PM | A Laboratory Investigation of Hydrothermal and Mechanical Stability of Proppants under Long-Term Enhanced Geothermal System Conditions | Presenting Author: Bruce Mutume
- 5:10 PM - 5:30 PM | Predicting Proppant Settling Under High-Pressure and High-Temperature Using CFD-DEM and Physics-Informed Neural Operators (PINOs) | Presenting Author: Israel Momoh
- 5:30 PM - 5:50 PM | Non-Monotonic Fracture Conductivity Evolution Driven by Temperature-Dependent, Stress-Assisted Quartz Dissolution in Utah FORGE Granite | Presenting Author: Prodeepta Neogi
- 5:50 PM - 6:10 PM | Tracer Testing in Propped EGS Fractures: Modeling and Analysis | Presenting Author: Sarah Sausan
- 6:10 PM - 6:30 PM | Laboratory Evaluation of Asperity- and Proppant-Dominated Fracture Conductivity in Enhanced Geothermal Systems | Presenting Author: Wenfeng Li

Session 4D: Reservoir & Production Performance | Meyerland (3rd Floor)

- 4:30 PM - 4:50 PM | Forward Modeling of Newberry EGS Circulation Considering Stress-Dependent Permeability | Presenting Author: Ahmad Ghassemi
- 4:50 PM - 5:10 PM | Technoeconomic and Statistical Evaluation of Well Placement Strategies and Spacing Effects in a Shallow Geothermal Reservoir | Presenting Author: Emmanuel Agyei
- 5:10 PM - 5:30 PM | Recovery Factors in the co-Production of Lithium and Geothermal Resources in New Project Development | Presenting Author: Richard Holt
- 5:30 PM - 5:50 PM | Tu Deh-Kah geothermal application for greenhouse heating from existing boreholes | Presenting Author: Haiyan Zhou
- 5:50 PM - 6:10 PM | Leveraging Physics-Based Monte Carlo Simulations to Quantify Subsurface Risk for Geothermal Drilling Insurance Programs | Presenting Author: Koenraad Beckers

- 6:10 PM - 6:30 PM | Advancing Geothermal Exploration & Sustainability with Reda Thermal Electrical Submersible Pump (ESP) | Presenting Author: Turgut Can Bilmez

Session 4E: Environmental, Land-Use & Stakeholder Considerations | Briar Grove (3rd Floor)

- 4:30 PM - 4:50 PM | Balancing Geothermal Energy Development with Biodiversity Conservation: A Case of Olkaria Geothermal Project, Kenya | Presenting Author: Elizabeth Mwangi-Gachau
- 4:50 PM - 5:10 PM | Understanding Social Risk and Mapping Stakeholder Influence Before Community Engagement in Geothermal Development | Presenting Author: Frank Rizzo
- 5:10 PM - 5:30 PM | Quantifying the Influence of Structural Heterogeneity and Basement Topography on Hydrothermal Impact Assessments in Rift Valley Systems | Presenting Author: Michael Rush
- 5:30 PM - 5:50 PM | Updated Geothermal Disturbance Impacts on Public Lands | Presenting Author: Jesse Cruce
- 5:50 PM - 6:10 PM | Applying Play Fairway Analysis Methods to Geological Thermal Energy Storage Analysis | Presenting Author: Josh McTigue
- 6:10 PM - 6:30 PM | Designing Transnational Indigenous Governance Infrastructure for Geothermal Deployment | Presenting Author: Leighton Gall

Session 4F: Permitting & Policy - Deployment, Transmission & Regulatory Frameworks | Kingwood 3rd Floor)

- 4:30 PM - 4:50 PM | From Concept to Commercialization: Five Pillars for State-Level Next-Generation Geothermal Deployment | Presenting Author: Ann Garth
- 4:50 PM - 5:10 PM | Co-optimized transmission and generation planning for the Great Basin region with an emphasis on defining priority geothermal power generation zones | Presenting Author: Bill Henry
- 5:10 PM - 5:30 PM | Geothermal as a Strategic Asset for U.S. Energy Dominance | Presenting Author: J Michael Grappone
- 5:30 PM - 5:50 PM | Accelerating Geothermal Deployment through AI-Enhanced Permitting: Introducing PermitAI(TM) for State and Federal Regulatory Frameworks | Presenting Author: James Jackson
- 5:50 PM - 6:10 PM | Stranded Wells, Stored Heat: A Regulatory Case for Brownfield Geothermal Energy Storage | Presenting Author: Moones Alamooti

7:00 PM - 8:00 PM | GR Trivia Night | Meyerland (3rd Floor)

Put your knowledge to the test and enjoy a lively evening with fellow conference attendees! Trivia Night is your chance to team up, tackle fun challenges, celebrate the answers you know, and laugh about the ones you miss. Compete for prizes, bragging rights, and a little conference glory while making new connections in a relaxed setting. Participation is included with your conference registration.

Brought to you by:



Concurrent Technical Sessions – Wednesday, September 23

7:30 AM – 9:30 AM | Concurrent Sessions 5

Session 5A: Panel - What About Water? A Discussion on Next-Generation Geothermal Systems and Water, Including Technology Innovations, State-by-State Regulations, and Stakeholder Perceptions | Houston Ballroom 5 (2nd Floor)

As electricity demand rapidly grows to meet the needs of large loads, an “estimated additional 100GW of new peak capacity is needed by 2030,” (Shehabit, et al., 2025). To meet this growing need, geothermal has the potential to serve as a reliable and local resource. Previous National Laboratory of the Rockies studies estimate average enhanced geothermal systems (EGS) resource potential ranging from 27 to 57 terawatt-electric within 1 to 7 kilometers depth across the United States (Akindipe, et al., 2025). With this potential in mind, questions surrounding known water availability and estimated use are still unknown. This panel convenes a diverse set of experts to discuss the following topical areas: Data, methods, and modeling available to estimate expected water volumes and supply limitations. State regulations and Western water rights. Historical water uses for energy. Potential impacts to stakeholders and perceptions related to EGS.

Moderators: Faith Smith, NLR and Whitney Trainor-Guitton, NLR

Panelists:

- *Lauren Foster, Neptune Inc.*
- *Chris Fredd, Ignovis*
- *Cary Lindsey, Hexagon Energy*
- *Kristie McLin, University of Utah*
- *Jaclyn Urbank, Jacobs & GR Board of Directors*

Session 5B: AI & Machine Learning III - Operations, Forecasting & Integrated Energy Systems | Houston Ballroom 6 (2nd Floor)

- 7:30 AM - 7:50 AM | Integrated Machine Learning Framework for Rate of Penetration Prediction in Geothermal Drilling: Combining Operational and Geomechanical Data | Presenting Author: Emmanuel Agyei
- 7:50 AM - 8:10 AM | Forecasting Induced Seismicity Magnitude using QuakeCastNet and Evolutionary Intelligence | Presenting Author: Nori Nakata
- 8:10 AM - 8:30 AM | Reducing Non-Productive Time in Geothermal Drilling Using an Agentic AI Situational Awareness System | Presenting Author: Pradeepkumar Ashok
- 8:30 AM - 8:50 AM | Forecasting the Future of Geothermal Energy in Mexico: An Integrated Socioeconomic, Environmental, and Energy Modeling Approach | Presenting Author: Lili Toledo Paz

Session 5C: EGS V - Conformance Control & Flow Management | Houston Ballroom 7 (2nd Floor)

- 7:30 AM - 7:50 AM | Development and Core flooding Evaluation of a Lignin-Based High Temperature Particle Gel for Conformance Control in Super Hot Reservoirs | Presenting Author: Caleb Darko

- 7:50 AM - 8:10 AM | Mitigating Thermal Short-Circuiting and Enhancing Long-Term Geothermal and EGS Performance Using Advanced Flow Control Devices (AFCDs) with Segmented Completion Design | Presenting Author: Morteza Akbari
- 8:10 AM - 8:30 AM | ICD-Enabled Stress Management to Mitigate Thermal Short-Circuiting in EGS | Presenting Author: Qitao Zhang
- 8:30 AM - 8:50 AM | Novel Frac Sleeve Design for Water Conformance in Enhanced Geothermal Systems (EGS) Leads to Improved Thermal Efficiency | Presenting Author: Steven Fipke
- 8:50 AM - 9:10 AM | Numerical Modeling of Micro-Particle-Bearing Viscous Fluid for Temporary Fracture Plugging in EGS Reservoirs | Presenting Author: Tulujiang Dilireba
- 9:10 AM - 9:30 AM | Qualification Testing for Subsurface Use of a Next Generation EGS Fracturing and Conformance Control System | Presenting Author: William Fleckenstein

Session 5D: Closed-Loop Geothermal Systems | Meyerland (3rd Floor)

- 7:30 AM - 7:50 AM | Closed-Loop Geothermal Nationwide Capacity Modeling | Presenting Author: Abra Gold
- 7:50 AM - 8:10 AM | Modeling and Optimizing Borehole Thermal Energy Storage Systems using a Coupled Physics-Informed Neural Network and Genetic Algorithm | Presenting Author: Godwin Arthur
- 8:10 AM - 8:30 AM | Experimental Rheological Investigation of Graphene Nanoplatelet Nanofluids as Geothermal Working Fluids | Presenting Author: Ryder Murphy
- 8:30 AM - 8:50 AM | Design and operational optimization of CO₂ deep geothermal coaxial closed loops | Presenting Author: Vlasios Leontidis

10:00 AM – 12:00 PM | Concurrent Sessions 6

Session 6A: Panel - Connecting Geothermal to Data Centers: Practical Pathways to Integrate Geothermal Power in the AI Boom | Houston Ballroom 5 (2nd Floor)

This panel will explore opportunities for geothermal applications to support surging data center energy demands and examine how geothermal energy can be successfully integrated into data center developments. The discussion will address synergies and friction within the stakeholder ecosystem, project delivery models—including financial and legal considerations—and key development and design considerations across subsurface, surface, and data center infrastructure required to bring geothermal power projects from concept to operation. Key consideration will be given to both behind-the-meter configurations, where geothermal assets are co-located with and directly supply the data center, and front-of-the-meter approaches, where geothermal generation is developed as grid-connected infrastructure supporting the facility through power purchase agreements or utility supply.

Moderator: Laura Chiaramonte, EPRI

Panelists:

- *Cory Draper, GreenFire Energy*
- *Cheryl Lim, Arup*

Session 6B: Well Construction, Completion & High-Temperature Integrity | Houston Ballroom 6 (2nd Floor)

- 10:00 AM - 10:20 AM | Self-Sensing Graphene Wellbore Cements for Geothermal Applications | Presenting Author: Ali Ettehad
- 10:20 AM - 10:40 AM | Modeling Geothermal Wellhead Movement for Single- and Double-Skin Completion | Presenting Author: Elvin Allahverdiyev
- 10:40 AM - 11:00 AM | Mineral-Based Cementitious Materials for High-Temperature Geothermal Wells | Presenting Author: Tatiana Pyatina
- 11:00 AM - 11:20 AM | Influence of Initial Cement Defects and Thermal Cycling on Well Integrity in Geothermal Wells | Presenting Author: Yuxing Wu

Session 6C: EGS VI - Reservoir Modeling, Circulation, & Thermal Performance | Houston Ballroom 7 (2nd Floor)

- 10:00 AM - 10:20 AM | Numerical Simulation Benchmarking and Optimization of Enhanced Geothermal Systems Under Different Well Configurations and Operational Conditions | Presenting Author: Ali Shariat
- 10:20 AM - 10:40 AM | Pressure Transient Analysis of Flow Regimes in a Stimulated Crystalline EGS Reservoir: A Utah FORGE Case Study | Presenting Author: Farhad Bina
- 10:40 AM - 11:00 AM | A Reduced-Order Huff-n-Puff Heat Extraction Model | Presenting Author: Mauricio Rivas
- 11:00 AM - 11:20 AM | Supercritical CO₂ Circulation in Enhanced Geothermal Systems for Power Generation and Carbon Storage | Presenting Author: Nelson Barros-Galvis
- 11:20 AM - 11:40 AM | EGSim: A Surrogate-Based Digital Twin for Interactive Subsurface EGS Design and Energy Forecasting | Presenting Author: Piyush Kumar Kumawat
- 11:40 AM - 12:00 PM | Enhanced Produced Lithium Concentration Forecasting Through Discrete Fracture Network Integrated Reservoir Modeling in the Salton Sea Geothermal Field | Presenting Author: Danny Sims

Session 6D: Low-Temperature & Direct Use II - Thermal Storage, Cooling & Borehole Systems | Meyerland (3rd Floor)

- 10:00 AM - 10:20 AM | Cool Under Pressure: Thermal Management with Gypsum-Graphite Composites | Presenting Author: Hortencia Torres
- 10:20 AM - 10:40 AM | Evaluation of a Shallow Underground Thermal Battery as a Peak-Load Replacement for Deep Borehole Heat Exchangers | Presenting Author: Xiaobing Liu
- 10:40 AM - 11:00 AM | Three-Dimensional Numerical Modeling of Thermal Energy Extraction from an Abandoned Mine Shaft Using Closed-Loop Heat Exchangers | Presenting Author: Sajjan Pokhrel
- 11:00 AM - 11:20 AM | Cold Underground Thermal Energy Storage for AI Data Center Cooling: Presenting Author: Guangdong Zhu

1:30 PM – 3:30 PM | Concurrent Sessions 7

Session 7A: Panel - Future of Geothermal in Texas and Gulf Coast: From Resource to Commercial Reality | Houston Ballroom 5 (2nd Floor)

The U.S. Gulf Coast, particularly Texas and adjacent states, contains significant but underdeveloped geothermal resources. Multiple pilot projects, feasibility studies, and technology demonstrations are currently underway, yet no commercial geothermal power plants are operating in this region today.

Unlike the western U.S., where geothermal development has benefited from high geothermal gradients, decades of exploration, minimal competition from low-cost natural gas, and sustained government support, the Gulf Coast presents a fundamentally different context. Here, geothermal must compete within a natural-gas-dominated power market, while also navigating lower gradients, regulatory novelty, and limited geothermal operating precedent.

At the same time, the region offers unique advantages: rapidly growing electricity demand, an extensive oil and gas infrastructure, subsurface database, world-class drilling and completions expertise, a skilled workforce, business-friendly policies, and opportunities for co-production, direct-use applications, and grid-support services, and data centers. These factors make the Gulf Coast a compelling—if unconventional—testbed for next-generation geothermal commercialization.

This panel will explore what it will take to move geothermal from “potential” to “projects” in Texas and the broader Gulf Coast.

The panel will address four core questions:

1. What makes Gulf Coast geothermal fundamentally different from western U.S. geothermal?
2. Which resource classes and technologies are most viable in Texas and adjacent states?
3. What end-use cases (power, heat, hybrid systems) can work economically today?
4. What policy, market, and partnership models are needed to reach commercial deployment?

Moderator: Ken Wisian, HotRock Geothermal, Bureau of Economic Geology, The University of Texas at Austin

Panelists:

- *Shuvajit Bhattacharya, Bureau of Economic Geology, The University of Texas at Austin*
- *Cole Fisher, T5 Holdings*
- *Lev Ring, Sage Geosystems*
- *Barry Smitherman, TxGEA*

Session 7B: Regional Updates | Houston Ballroom 6 (2nd Floor)

- 1:30 PM - 1:50 PM | Research and Legislation Fuel Hawai'i's Geothermal Exploration: The University of Hawai'i and Hawai'i State Legislature Power Hawai'i's Geothermal Future | Presenting Author: Alice Kim
- 1:50 PM - 2:10 PM | 2025 Geothermal Exchange Program - Post Exchange Updates | Presenting Author: Faith Smith

- 2:10 PM - 2:30 PM | GEOTHERMAL DEVELOPMENTS IN TÜRKİYE | Presenting Author: Orhan Mertoglu
- 2:30 PM - 2:50 PM | SPRINGS - case studies of geothermal fields in the western USA | Presenting Author: Paul Schwering
- 2:50 PM - 3:10 PM | Updated Analysis of the Socorro Geothermal System | Presenting Author: Shari Kelley
- 3:10 PM - 3:30 PM | Due Diligence in using "Geothermal Everywhere" | Presenting Author: John Eichelberger

Session 7C: Logging, Monitoring & Instrumentation | Houston Ballroom 7 (2nd Floor)

- 1:30 PM - 1:50 PM | 300 Degree Celsius Geothermal Embedded Electronic System | Presenting Author: Andrew Wright
- 1:50 PM - 2:10 PM | Cased-Hole Straddle-Packer Microfrac Testing for In-Situ Stress and Lateral Strain Determination in the TU-Delft Geothermal Research Well | Presenting Author: Javier Franquet
- 2:10 PM - 2:30 PM | Multiphase Flowmeter for Real-Time In-line Monitoring of Geothermal Well Production of Steam and Brine 2-Phase Flow | Presenting Author: Linyuan Zhan
- 2:30 PM - 2:50 PM | Ensuring Downhole Tool Integrity and Zonal Isolation in Geothermal Wells through Long-Term Integrated Testing Setup | Presenting Author: Tayyab Shahid
- 2:50 PM - 3:10 PM | Closing the Borehole Trajectory Data Gap: The Case for Accessible Downhole Logging in Geothermal Loop Field | Presenting Author: Tunca Alikaya

Session 7D: Leveraging Oil & Gas for Geothermal | Meyerland (3rd Floor)

- 1:30 PM - 1:50 PM | Seismic-Integrated Reservoir and Surface Flowline Modeling for Electricity Co-Production at the Blackburn Oil Field | Presenting Author: Abra Gold
- 1:50 PM - 2:10 PM | Can Idle Wells Power the Energy Transition? Evaluating Geothermal Co-Production Viability Across the United States | Presenting Author: Jane Onu
- 2:10 PM - 2:30 PM | Repurposing Legacy Oil and Gas Wells for Community-Scale Thermal Energy Networks: A Study in Pierce, Colorado | Presenting Author: Johanna Ostrum
- 2:30 PM - 2:50 PM | Assessing the Suitability of an Advanced-Processes Hydrocarbon Reservoir Simulator for Modeling Conventional Geothermal Systems | Presenting Author: Ethan Chabora

Women in Geothermal (WING)

Women in Geothermal (WING) is a global network that aims to promote the education, professional development, and advancement of women in the geothermal community. Join WING for one (or more!) of the GRC events and learn how you can be a part of WING!

WING Yoga | 6:00 AM – 7:00 AM | Monday, September 21

Start your GRC out right with the Women in Geothermal (WING) opening health and wellness event: FREE yoga for all bodies! All skill levels welcome! WING teacher Bridget Dawn of Terra IntelliBridge will lead the way. This class will take principles from Yin Yoga, a slow-paced and gentle style of yoga that works with very basic postures to increase mobility, mobilize, stretch, and hydrate the body's extensive fascial network, and invite the practitioner into a deeply meditative internal space. Take some time to rejuvenate yourself and focus on wellness with this yoga practice!

Location to be announced.

Women in Geothermal (WING) Core Value Awards & Membership Meeting | 12:00 PM – 1:30 PM | Tuesday, September 22 | Hunter's Creek (3rd Floor)

Join us for a unique experience during lunch, where you can enjoy your meal while witnessing the annual presentation of the WING Core Value awards. This ceremony recognizes geothermal professionals who exemplify the organization's core values: caring, courageous, empowering, and open. Following this, there will be an engaging panel discussion focusing on WING's involvement in the industry. This event aims to empower and expand the presence of women in the geothermal industry. The keynote speaker and sponsor for this year's Core Value Awards is Quaise. Lunch will be provided.

WING Fun Run/Walk | 6:00 AM – 7:00 AM | Wednesday, September 23 | Meeting in Hotel Lobby

Fun Run by fellow Geothermal Running Enthusiasts. Meet up is at 6:00 AM on Wednesday in the front lobby of the Marriott Marquis Houston. Easy to pace yourself and meet some folks, repeated 1 mile loop close to hotel means you can head back when you need to. The last day of the conference, we made it! Take a victory lap with WING in our final health and wellness event of the conference. FREE and welcome to runners of any speed!

