

CCUS CONFERENCE WEEK 2025 (Final Program of September 11th, 2025)

“Whole Value Chain Carbon Capture, Utilization, and Storage (CCUS)”

Venue: CSM & Golden Hotel, 800 11th St, Golden, CO 80401, USA

Time: Monday Sept. 22nd - Friday Sept. 26th, 2025

Provided by: Petroleum Research School of Norway (NFiP), The Colorado-Norway Clean Energy Research and Educational Collaboration (ColNor), NorTex Petroleum Cluster, Rice University and Co-Hosted by Colorado School of Mines and Royal Norwegian Consulate General in San Francisco.

Sponsored by: Petroleum Research School of Norway (NFiP) & The Colorado-Norway Clean Energy Research and Educational Collaboration (ColNor), CSM, ConocoPhillips and Chevron.

Conference Objectives:

1. Emphasize Technological Solutions to the Dual Challenge of Climate Change & Energy Needs
2. Present Disruptive New Technologies in Low Carbon Energy Production
3. Provide a Whole Value Chain Approach Overview within CCUS
4. Demonstrate how CCUS may assist in reducing energy poverty while mitigating climate change
5. Accelerate CCUS collaboration between Norway, Europe, South America, Asia, and USA
6. Provide opportunity for experts in industry and academia to collectively discuss CCUS research
7. Provide PhD students with current CCUS research status and the way forward
8. Emphasize how captured anthropogenic CO₂ may mitigate climate change and provide reliable, affordable, and sustainable energy for the future utilizing CCUS in oil production
9. Provide oil industry opportunities to communicate needs to next generation energy engineers

Scientific Program:

- Day 1:** Climate Perspectives and CO₂ Capture
- Day 2:** CO₂ Capture and CO₂ Transport
- Day 3:** CO₂ Storage
- Day 4:** CO₂ Utilization in Hydrates and in Enhanced Oil Recovery (EOR)
 - Tour of CSM CCUS and EOR Laboratories
- Day 5:** CO₂ EOR and Whole Value Chain CCUS Future Development

Social Program:

- Day 1:** - Reception at Golden Hotel
- Day 4:** - Conference Dinner at The Golden Hotel
- Day 5:** - Tour of the Coors Brewery; dependent on individual reservations

Day 1: Monday Sept. 22nd

Climate Perspectives and CO₂ Capture

08:30 Registration and Coffee

09:00 *Opening Address*

Anders Tornquist, Norwegian Honorary Consul in Colorado

Welcome and Symposium Objectives

Arne Graue, Prof. of Physics, University of Bergen, Norway

Chair of the Boards: Petroleum Research School of Norway, ColNor and NorTex Petroleum Cluster

Walt Copan, Vice President for Research and Technology Transfer, Colorado School of Mines

Climate Perspectives

09:30 *CCUS Assessment: CCUS in the US - CCS in Europe - Global Importance of CCUS*

Arne Graue, Prof. of Physics, University of Bergen, Norway

Chair of the Boards: Petroleum Research School of Norway, ColNor and NorTex Petroleum Cluster

10:00 *Carbon Management in an Overshoot World*

Klaus Lackner, Arizona State University

10:30 *Coffee*

11:00 *ENERGY for the FUTURE – Energy Transition*

Arne Graue, Univ. of Bergen

11:30 *Reflections from Industry on the Energy Transition and the Future of CCUS*

Zainub Noor, Sr. Director, Low Carbon Solutions, Haliburton

12:00 *Lunch*

13:00 *Insurance Markets for Geological Liabilities in CO₂ Storage*

Ian Lange, Colorado School of Mines

13:30 *Inflation Reduction Act, BBB & Future CCUS in USA*

Anna Littlefield, Colorado School of Mines

14:00 *Policies and Economics of CCUS*

Ken Medlock, Baker Institute

14:30 *The Business Case for Carbon Capture, Utilization, and Storage*

Anna Littlefield, Colorado School of Mines

15:00 *Coffee*

15:30 *The Changing Face of Gas Processing in the Permian Basin USA: How Tax Incentives for CO₂ Storage Have Altered Mid-Stream Operations*

Robert Balch, Petroleum Recovery Research Center at New Mexico Tech

16:00 *Carbon Storage Obligations (CSO) - Simplifies Carbon Accounting*

Stéphanie Arcusa, Arizona State University

16:30 *Energy Balance of the Climate System: Contribution of Clouds and Aerosol to Uncertain Futures*

James Wilson, University of Denver

17:00 *End of Day*

19:00 - 21:00 *Reception at Golden Hotel*

Day 2: Tuesday Sept. 23rd

CO₂ Capture and CO₂ Transport

CO₂ Capture

09:00 *CO₂ Capture Technologies – An Overview*

Mike McGuirk and Robert Braun, CSM

09:30 *Post Combustion Capture*

Ryan Richards and Mike McGuirk, Colorado School of Mines

10:00 *CO₂ Capture from Air*

Klaus Lackner, Arizona State University

10:30 *Coffee*

11:00 *Precombustion and Oxyfuel Capture Technologies*

Greg Jackson, Colorado School of Mines

11:30 *Carbon Management of CO₂ Conversion toward Fuels, Chemicals, and Materials*

Joshua Schaidle, US National Renewable Energy Laboratory (NREL)

12:00 *Lunch*

CO₂ Transport

13:00 *CO₂ Pipeline Infrastructure -Overview and Numerical Simulations*

Bailian Chen, Los Alamos National Lab

13:30 *Large Scale, Long term CO₂ Storage by Ocean Iron Fertilization*

George Hirasaki, Rice University

- 14:00** *Future of Energy and the Path to Net Zero*
Robert Balch, Petroleum Recovery Research Center at New Mexico Tech
- 14:30** *CCUS in the USA and Industry Opportunities*
Sherilyn Williams-Stroud, Director of the Berg-Hughes Center, Prof. of Geosciences, Texas A&M Univ.
- 15:00** *Coffee*
- 15:30** *Panel Debate: USA and the World on CCUS – Energy Poverty, Climate Change & CCUS - Technology Solutions or Climate Ideology?*
Panelists:
- Josh Schaidle, US National Renewable Energy Laboratory (NREL)
 - Ken Medlock, Baker Institute
 - Sherilyn Williams-Stroud, Texas A&M University
 - Robert Balch, Petroleum Recovery Research Center at New Mexico Tech
 - Zainub Noor, Low Carbon Solutions, Haliburton
- Moderator:** Arne Graue, Univ. of Bergen, Norway
- 17:00** *End of Day*

Day 3: Wednesday Sept. 24th

CO₂ Storage

- 09:00** *Horizontal Wells, Water Disposal and CCUS - The Changing Landscapes and Lessons Learned from Primary Production to Injection Projects*
Steve Melzer, Melzer Consulting
- 09:30** *Regulatory Challenges in CO₂ Storage*
Michael Moore, Managing Partner EWSA and Senior VP Public Policy and Carbon Markets for PowerScape Global
- 10:00** *Ongoing and Planned Large Scale CO₂ Storage Projects Worldwide and Introduction to the Global Carbon Management Academy*
Jarad Daniels and Vanshika Goel, GCCS Institute
- 10:30** *Coffee*
- 11:00** *CO₂ Storage and Leaky Wellbores and Barrier Materials*
Mileva Radonjic, Oklahoma State University (OSU)
- 11:30** *How Mega-scale CCUS projects are forming up in the US per policy, regulations and incentives*
Michael Moore, Managing Partner EWSA and Senior VP Public Policy and Carbon Markets for PowerScape Global
- 12:00** *Lunch*



- 13:00** *Reservoir-on-a-Chip Investigation of Post-Carbon Capture Solutions for Enhanced Oil Recovery*
Myeongsub Kim, Florida Atlantic University (FAU)
- 13:30** *The Longship Project: Whole Value Chain CCUS Demonstration Project on the Norwegian Continental Shelf*
Arne Graue, University of Bergen
- 14:00** *Experimental Insights on the Impact of Injection Strategies on CO₂ Storage in Aquifers*
Stella Eytayo, Texas Tech. University
- 14:30** *Carbon and Related Markets Growing Around Mega-Scale Project Development*
Michael Moore, Managing Partner EWSA and Senior VP Public Policy and Carbon Markets for PowerScape Global
- 15:00** *Coffee*
- 15:30** *CCUS in Latin America*
Pedro Nel Benjumea Hernández, National University of Colombia (UNAL)
- 16:00** *CO₂ Storage, Monitoring, Verification and Accounting*
Björn Paulsson, Paulsson Inc.
- 16:30** *Tribal CCUS*
CJ Stewart, Energy Resources Director, Crow Nation, Montana
- 17:00** *End of Day*

Day 4: Thursday Sept. 25th

CO₂ Utilization in Hydrates and in Enhanced Oil Recovery (EOR) - Tour of CSM CCUS and EOR Laboratories

- 09:00** *Fundamentals of Hydrates, Climate Perspectives, and Energy Potentials*
Carolyn Koh, Colorado School of Mines
- 09:30** *CO₂ Storage in Hydrates with Associated Methane Production*
Arne Graue, University of Bergen
- 10:00** *Field Experiences from CO₂ Injections in Hydrates: North Slope CO₂-CH₄ Exchange Project*
Arne Graue, University of Bergen
- 10:30** *Coffee*
- 11:00** *Machine Learning-Based Fault Detection for CCS Site Characterization*
Lianjie Huang, Los Alamos National Lab
- 12:00** *Lunch*



CO₂ Utilization in EOR as CCUS

- 13:00** *CO₂ for EOR – Historical Perspectives, Current State of the Art Technology Status, and Technological Challenges*
Hossein Kazemi, Colorado School of Mines
- 14:00** *Physical Processes and Modeling Studies of CO₂ Storage in Subsurface Formations*
Yu-Shu Wu, Colorado School of Mines
- 14:30** *Global Strategies to Meet the Dual Challenge*
Arne Graue, University of Bergen
- 15:00** *Coffee*
- 15:30** *CSM Lab Tour*
- 17:00** *End of Day*
- 19:00** *Conference Dinner at the Golden Hotel*

Day 5: Friday Sept. 26th

CO₂ EOR, Policy, Economics and Whole Value Chain CCUS Future Development

- Tour of Coors Brewery

- 09:00** *How Foam Develops Apparent Viscosity in CO₂ EOR*
George Hirasaki, Rice University
- 09:30** *CO₂ Foam EOR for Mobility Control*
Arne Graue, University of Bergen
- 10:00** *CO₂ Foam EOR Field Pilots in Texas*
Arne Graue, University of Bergen
- 10:30** *Coffee*
- 11:00** *Current CO₂ EOR Perspectives*
Hossein Kazemi, Colorado School of Mines
- 12:00** *Lunch*
- 13:00** *Panel Debate: CO₂ EOR as CCUS: Status, Future Perspectives & Economics*
Panelists (TBC): Mike Matson, Hossein Kazemi, Yu-Shu Wu & 2 PhD students
Moderator: Arne Graue, NFiP



13:30 - Tour of the Coors Brewery; dependent on individual reservations
Coors Brewery no longer offers Group Tours. Each individual that would like to participate in a tour of the brewery needs to reserve tickets themselves at:
<https://www.coorsbrewerytour.com/tour-information#id=coors-brewery-tour>

14:00 *End of Conference*