

DOE-NETL's 2020

# INTEGRATED VIRTUAL MEETING

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
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October 2

October 8

October 9

October 12

October 23

October 29

October 30

Monday 28th

Tuesday

Wednesday

Thursday

Friday  
No events

# Schedule Pending

**HIGH PERFORMANCE MATERIALS**

Monday

**Tuesday 29th**

Wednesday

Thursday

**Friday**  
**No events**

**1 PM**

Introduction  
Regis Conrad, DOE FE

**1:10 PM**

Keynote - Advanced Alloy Development at NETL  
David Alman, NETL

**Alloy Development & Life Prediction Panel Discussion**  
Moderators: David Alman; Marisa Arnold

**1:30 PM**

Computer Vision and Machine Learning making the Processing-Microstructure-Property connection in Heat Resistant Alloys (UCFER)  
Elizabeth Holm, CMU

**1:40 PM**

Computational Modeling and Simulation (XMAT)  
Laurent Capolungo, eXtremeMAT National Laboratory Consortium, LANL

**1:50 PM**

High Throughput Computational Framework of Materials Properties for Extreme Environments (FE0031553)  
Zi-Kui Liu, Pennsylvania State University

**2 PM**

Characterization of Long-Term Service Coal Combustion Power Plant Extreme Environment Materials (FE0031562)  
Steven Kung, EPRI

**2:10 PM**

Multi-modal Approach to Modeling Creep Deformation In Ni-Base Superalloys (FE0031554)  
Ridwan Sakidja, Missouri State University

**2:20 PM**

**Facilitated Discussion**

**3 PM**

**Adjourn**

Monday

Tuesday

Wednesday 30th

Thursday

Friday  
No events

# Schedule Pending

Monday

Tuesday

Wednesday

Thursday 1st

Friday  
No events

## WATER MANAGEMENT

<b>1 PM</b>	Introduction Briggs White, NETL
<b>1:10 PM</b>	NETL Guidelines for TEAs and Plant-level Analyses (NETL SEA) Eric Grol, NETL
<b>Condenser Panel Discussion</b> Moderator: Barbara Carney	
<b>1:30 PM</b>	A Novel Steam Condenser with Loop Thermosyphons and Film-Forming Agents for Improved Heat Transfer Efficiency and Durability Richard Bonner, Advanced Cooling
<b>1:40 PM</b>	Novel Patterned Surfaces for Improved Condenser Performance in Power Plants (FE0031556) Ranga Pitchumani, Virginia Tech
<b>1:50 PM</b>	Capillary-Driven Condensation for Heat Transfer Enhancement in Steam Power Plants (FE0031677) Ranga Pitchumani, Virginia Tech
<b>2:20 PM</b>	Enhancing Steam-Side Heat Transfer via Microdroplet Ejection using Inorganic Coatings (FE0031675) Lance Brockway, Nelumbo
<b>2:30 PM</b>	Application of Heat Transfer Enhancement System for Improved Efficiency of Power Plant Condensers (FE0031561) Noah Snyder, Interphase
<b>2:40 PM</b>	<b>Facilitated Discussion</b>
<b>3 PM</b>	<b>Adjourn</b>

Monday 5th

Tuesday

Wednesday

Thursday  
No events

Friday  
No events

CARBON CAPTURE

Moderator: TBD

<b>10 AM</b>	Introductory Remarks Angelos Kokkinos, DOE
<b>10:30 AM</b>	Carbon Capture Program Overview Dan Hancu, DOE/NETL
<b>11 AM</b>	Energy Efficient GO-PEEK Hybrid Membrane Process for Post-Combustion Carbon Dioxide Capture (FE0026383) Shiguang Li, GTI
<b>11:30 AM</b>	Electrochemically-Mediated Amine Regeneration in CO <sub>2</sub> Scrubbing Processes (FE0026489) Trevor A. Hatton, MIT
<b>12 PM</b>	Engineering (Rapid Design and Testing of Novel Gas-Liquid Contacting Devices for Post-Combustion CO <sub>2</sub> Capture Via 3D Printing: Modular Adaptive Packing (FE0031530) Erik Meuleman, ION
<b>12:30 PM</b>	<b>Lunch</b>
<b>1 PM</b>	Flue Gas Aerosol Pretreatment Technologies to Minimize PCC Solvent Losses (FE0031592) Devin Bostick, Linde, LLC
<b>1:30 PM</b>	A Process with Decoupled Absorber Kinetics and Solvent Regeneration through Membrane Dewatering and In-Column Heat Transfer (FE0031604) Kunlei Liu, University of Kentucky
<b>2 PM</b>	Inexpensive and Sustainable Anti-Corrosion Coating for Power Generation Applications (FE0031659) John Watkins, LumiShield Technologies, Inc.
<b>2:30 PM</b>	<b>Break</b>
<b>2:45 PM</b>	Validation of Transformational CO <sub>2</sub> Capture Solvent Technology with Revolutionary Stability (FE0031727) Erik Meuleman, ION Engineering, LLC
<b>3:15 PM</b>	Molecular Refinement of Transformational Solvents for CO <sub>2</sub> Separations (FWP-70924) David Heldebrant, Pacific Northwest National Laboratory (PNNL)
<b>3:45 PM</b>	Demonstration and Validation of Additively Manufactured Intensified Device for Enhanced Carbon Capture (FWP-FEAA375) Xin Sun, Oak Ridge National Laboratory (ORNL)
<b>4:15 PM</b>	<b>Concluding Remarks: Day 1</b>

Monday

Tuesday 6th

Wednesday

Thursday  
No events

Friday  
No events

CARBON CAPTURE

Moderator: TBD

- 11:30 AM** Amine-Appended MOFs (FWP-FP0006194)  
Jeffrey Long, LBNL
- 12 PM** High Performance Thin Film Composite Membranes for Post-combustion Carbon Capture  
Lingxiang Zhu, NETL/DOE
- 12:30 PM** **Lunch**
- 1 PM** CCSI2 Overview  
Mike Matuszewski, CCSI2
- 1:05 PM** Machine Learning Approaches to Accelerate CFD Analyses  
Dave Widemann/Dr. Brenda Ng/Dr. Grigorios Panagakos
- 1:30 PM** Process Optimization of Advanced CO2BOL Solvent Systems  
Josh Morgan
- 2 PM** Sorbent Based Post-Combustion CO<sub>2</sub> Slipstream Testing (FE0012870)  
Jeannine Elliott, TDA Research Inc.
- 2:30 PM** **Break**
- 2:45 PM** Pilot Testing of a Highly Effective Pre-Combustion Sorbent-Based Carbon Capture System (FE0013105)  
Gokhan Alptekin, TDA Research, Inc.
- 3:15 PM** Gap Analysis for Modular Scale Pre-combustion Carbon Capture, NETL  
Kathryn Smith, DOE/NETL
- 3:45 PM** Alkanolamines for Acid Gas Removal in Gasification Processes (FWP-725646)  
Phillip Koech, PNNL
- 4:15 PM** **Concluding Remarks: Day 2**

Monday

Tuesday

Wednesday 7th

Thursday  
No events

Friday  
No events

## CARBON CAPTURE

Moderator: TBD

- 10 AM** Engineering Scale Testing of Transformational Non-Aqueous Solvent- Based CO<sub>2</sub> Capture Process at TCM (FE0031590)  
Marty Lail, Research Triangle Institute
- 10:30 AM** Scale-Up and Testing of Advanced Polaris Membrane CO<sub>2</sub> Capture Technology (FE0031591)  
Tim Merkel, MTR
- 11 AM** Membrane-Sorbent Hybrid System for Post Combustion Capture (FE0031603)  
Gokhan Alptekin, TDA Research
- 11:30 AM** FOA 2187 & FOA 2188 Selections  
Lynn Brickett, DOE
- 12 PM** Update on Carbon Capture Techno-economic Analysis at NETL  
Tim Fout, DOE/NETL
- 12:30 PM** **Lunch**
- 1 PM** Life Cycle Analysis at NETL  
Tim Skone, DOE/NETL
- 1:45 PM** Government Panel on DAC  
TBD
- 2:45 PM** **Break**
- 3 PM** Panel (TBD)
- 4 PM** **Concluding Remarks**



Monday  
No events

Tuesday 13th

Wednesday

Thursday

Friday

### FIELD LABS – EOR

Moderator: Joseph Renk

- 1 PM** The Eagle Ford Shale Laboratory: A Field Study of the Stimulated Reservoir Volume, Detailed Fracture Characteristics, and EOR Potential  
Dan Hill, Texas A&M
- 1:20 PM** Chemically Enabled Carbon Dioxide Enhanced Oil Recovery in Multi-Porosity, Hydrothermally Altered Carbonates in the Southern Michigan Basin  
Neeraj Gupta, Battelle
- 1:40 PM** Engineered Water for Improved Oil Recovery from Fractured Reservoirs  
Kishore Mohanty, University of Texas at Austin
- 2 PM** Subtask 3.1 – Bakken EOR  
Nicholas Azzolina and Jim Sorensen, Energy & Environmental Research Center University of North Dakota
- 2:20 PM** **Break**

Moderator: David Cercone

- 2:40 PM** Carbon Dioxide Enhanced Oil Recovery Improvement In Conventional Fields Using Rich Gas  
Nicholas Azzolina and Jim Sorensen, Energy & Environmental Research Center University of North Dakota
- 3 PM** Improving Enhanced Oil Recovery Performance Through Data Analytics and Next-Generation Controllable Completions  
Nicholas Azzolina and Jim Sorensen, Energy & Environmental Research Center University of North Dakota
- 3:20 PM** Field Pilot Test of Foam-Assisted Hydrocarbon Gas Injection in Bakken Formations  
Mohammad Piri, University of Wyoming
- 3:40 PM** First Ever Field Pilot on Alaska's North Slope to Validate the Use of Polymer Floods for Heavy Oil EOR  
Abhijit Dandekar, University of Alaska Fairban
- 4 PM** **Adjourn**

Monday  
No events

Tuesday

Wednesday 14th

Thursday

Friday

## HYDRAULIC FRACTURING TECHNOLOGIES

Moderator: Gary Covatch

**1 PM** Fully Distributed Acoustic and Magnetic Field Monitoring Via a Single Fiber Line for Optimized Production of Unconventional Resource Plays  
Gary Pickrell, Virginia Tech

**1:20 PM** Large-Volume Stimulation of Rock for Greatly Enhanced Fluids Recovery Using Targeted Seismic-Assisted Hydraulic Fracturing  
Raman Singh, Oklahoma State University

**1:40 PM** Demonstration of Proof of Concept of a Multi-Physics Approach for Real-Time Remote Monitoring of Dynamic Changes in Pressure and Salinity in Hydraulically Fractured Networks  
Mohsen Ahmadian, University of Texas at Austin

**2 PM** Dynamic Binary Complexes (DBC) as Super-Adjustable Viscosity Modifiers for Hydraulic Fracturing Fluids  
Mustafa Akbulut, Texas A&M

**2:20 PM** **Break**

Moderator: William Fincham

**2:40 PM** Using Natural Gas Liquids to Recover Unconventional Oil and Gas Resources  
Mark Moody, Battelle

**3 PM** All-Digital Sensor System for Distributed Downhole Pressure Monitoring in Unconventional Fields  
Hai Xiao, Clemson

**3:20 PM** Development and Field Testing Novel Natural Gas Surface Process Equipment for Replacement of Water as Primary Hydraulic Fracturing Fluid  
Griffin Beck, SwRI

**3:40 PM** Development of an Optical Based Single Well Seismic System (OSWS) for Improved Characterization and Monitoring of Fractures in UOG Systems  
Bjorn Paulsson, Paulsson

**4 PM** **Break**

**4:20 PM** Passive Acoustic Metamaterial Proppants for Advanced Hydraulic Fracture Diagnostics  
Jacob Pollock, Oceanit

**4:40 PM** Acoustic Smart Cement for Well Integrity Diagnostics  
Jacob Pollock, Oceanit

**5 PM** **Adjourn**

Monday  
No events

Tuesday

Wednesday

Thursday 15th

Friday

## FIELD LABS – EMERGING PLAYS AND DA/ML

Moderator: Robert Vagnetti

- 1 PM** Field Laboratory for Emerging Stacked Unconventional Plays (ESUP) in Central Appalachia  
Nino Ripepi, Virginia Tech
- 1:20 PM** Tuscaloosa Marine Shale Laboratory  
Mehdi Mokhtari, University of Louisiana at Lafayette
- 1:40 PM** Field Evaluation of the Caney Shale as an Emerging Unconventional Play, Southern Oklahoma  
Mileva Radonjic, Oklahoma State University
- 2 PM** Conasauga Shale Research Consortium  
John Hickman, University of Kentucky
- 2:20 PM** **Break**

Moderator: Stephen Henry

- 2:40 PM** Unlocking the Tight Oil Reservoirs of the Powder River Basin, Wyoming  
Steven Carpenter, University of Wyoming
- 3 PM** Improving Production in the Emerging Paradox Oil Play  
Brian McPherson, University of Utah
- 3:20 PM** Enabling Cost Effective High Quality Seismic Monitoring of Unconventional Reservoirs with Fiber Optics  
Caleb Christensen, MagiQ Technologies
- 3:40 PM** A Novel 'Smart Microchip Proppants' Technology for Precision Diagnostics of Hydraulic Fracture Networks  
Amirmasoud Dahaghi, University of Kansas
- 4 PM** **Break**
- 4:20 PM** Early Prediction and Prevention of Frac Screen-Out using Deep Reinforcement Learning  
Hamed Soroush, Petrolern, LLC
- 4:40 PM** Enhance Full-Waveform Inversion with Machine Learned Low-Frequency Signals  
Wenyi.Hu@agtgeo.com, Advanced Geophysical Technology, Inc.
- 5 PM** **Adjourn**

Monday  
No events

Tuesday

Wednesday

Thursday

Friday 16th

## FUNDAMENTAL RESEARCH

Moderator: Bruce Brown

- 1 PM** Numerical and Laboratory Investigations for Maximization of Production from Tight/Shale Oil Reservoirs  
George Moridis, LBNL
- 1:20 PM** Fundamentals of Unconventional Reservoirs Research  
George Guthrie, LANL
- 1:40 PM** Improved Unconventional Reservoir Stimulation Through Understanding and Enhancing Gravity-Assisted Recovery of Fluids  
Testu Tokunaga, LBNL
- 2 PM** Basin-Specific Geochemistry to Promote Unconventional Efficiency  
John Bargar, SLAC

**2:20 PM Break**

Moderator: TBD

- 2:40 PM** Fundamental Understanding of CH<sub>4</sub>-CO<sub>2</sub>-H<sub>2</sub>O Interactions in Shale Nanopores Under Reservoir Conditions  
Yifeng Wang, SNL
- 3 PM** A New Framework for Microscopic to Reservoir-Scale Simulation of Hydraulic Fracturing and Production: Testing with Comprehensive Data from HFTS and Other Hydraulic Fracturing Field Test Sites  
Joe Morris, LLNL
- 3:20 PM** Role of Shale Geomechanical Changes in Affecting Gas and Fluid Flow  
TBD, NETL
- 3:40 PM** Geochemical Reactions Affecting Reservoir Porosity and Permeability  
TBD, NETL
- 4 PM Break**
- 4:20 PM** Shale Microbial Ecology Affecting Reservoir  
TBD, NETL
- 4:40 PM** Characterizing CO<sub>2</sub> as a Recovery Agent to Mobilize Hydrocarbons from Shale  
TBD, NETL
- 5 PM** Oilfield Mineral Scale Management Technology Development  
TBD, NETL
- 5:20 PM Adjourn**

Monday 19th

Tuesday

Wednesday

Thursday

Friday  
No events

## ADVANCED COAL PROCESSING

Moderator: Charles Miller

- 12 PM** Program Overview  
Joe Stoffa, NNETL
- 12:30 PM** Advanced Coal Processing  
Christopher Matranga, NETL-RIC
- 1 PM** Coal Conversion for Carbon Fibers and Composites  
Edgar Lara-Curzio, ORNL
- 1:30 PM** Coal to Carbon Fiber (C2CF) Continuous Processing for High Value Composites (FE0031796)  
Matthew Weisenberger, University of Kentucky
- 2 PM** Experimental Validation and Continuous Testing of an On-Purpose High-Yield Pitch Synthesis Process for Producing Carbon Fiber from US Domestic Coal  
and  
Coal to Carbon Fiber Novel Supercritical Carbon Dioxide (SCO<sub>2</sub>) Solvated Process (FE0031800)  
Randall Atkins, Ramaco Carbon, LLC
- 2:30 PM** **Break**

Moderator: Omer Bakshi

- 3 PM** Silicon Carbide (SiC) Foam for Molten Salt Containment in CSP-GEN3 Systems (SC0018678)  
Dwayne Morgan, Touchstone Research Laboratory, Ltd.
- 3:30 PM** Direct Utilization of U.S. Coal as Feedstock for the Manufacture of High-Value Coal Plastic Composites (FE0031809)  
Jason Trembly, Ohio University
- 4 PM** Coal Core Composites for Low Cost, Light Weight, Fire Resistant Panels and Roofing Materials (SC0018794)  
Walter Sherwood, Semplastics EHC LLC
- 4:30 PM** A Novel Process for Converting Coal to High-Value Polyurethane Products (FE0031795)  
Satya Chauhan, Battelle Memorial Institute

Monday

Tuesday 20th

Wednesday

Thursday

Friday  
No events

### ADVANCED COAL PROCESSING

Moderator: Anthony Zinn

- 12 PM** Conversion of Coal to Li-Ion Battery Grade (Potato) Graphite (FE0031797)  
Michael Wagner, George Washington University
- 12:30 PM** Conversion of Domestic US Coal into Exceedingly High-Quality Graphene (FE0031794)  
James Tour, Rice University
- 1 PM** High Yield Microwave Plasma Conversion of Coal for Low-cost 3D Printable Composites (FWP-FEAA365)  
Amit Naskar, ORNL
- 1:30 PM** Efficient Ultra-Rapid Microwave Plasma Process for Generation of High Value Industrial Carbons and 3D Printable Composites from Domestic Coal (FE0031793)  
George Skoptsov, H Quest Vanguard, Inc.
- 2 PM** U.S. Coal to Conductive Inks (SC0018694)  
James Hnat, Minus 100, LLC
- 2:30 PM** **Break**

Moderator: Charles Miller

- 3 PM** Production of Carbon Nanomaterials and Sorbents from Domestic U.S. Coal (FE0031798)  
Seyed Dastgheib, University of Illinois at Urbana-Champaign
- 3:30 PM** Efficient Process for the Production of High Conductivity, Carbon-Rich Materials from Coal (SC0018837)  
Dorin Preda, Physical Sciences, Inc.
- 4 PM** The Novel Charfuel Coal Refining Process 18 Tpd Pilot Plant Project for Co-Producing an Upgraded Coal Product and Commercially Valuable Co-Products (FE0031708)  
Lee Meyer, Carbon Fuels LLC
- 4:30 PM** Pilot-Scale Testing of the Hydrophobic-Hydrophilic Separation Process to Produce Value-Added Products from Waste Coals (FE0031711)  
James Reyher, Minerals Refining Company, LLC

Monday

Tuesday

Wednesday 21st

Thursday

Friday  
No events

**CARBON UTILIZATION**

- 11 AM** Novel Algae Technology for CO<sub>2</sub> Utilization (SC0017077)  
James Maloney, Helios-NRG, LLC
- 11:30 AM** Electrochemical Conversion of Carbon Dioxide to Alcohols (FE0029868)  
Feng Jiao, University of Delaware
- 12 PM** Integrated Capture and Conversion of CO<sub>2</sub> to Methanol (ICCCM) Process Technology (TCF-19-17862)  
Robert Dagle, Pacific Northwest National Laboratory (PNNL)
- 12:30 PM** **Lunch**
- 1 PM** Storing CO<sub>2</sub> in Built Infrastructure: CO<sub>2</sub> Carbonation of Precast Concrete Products (FE0030684)  
Brian Robert Ellis, University of Michigan
- 1:30 PM** Beneficial use of CO<sub>2</sub> from Coal-Fired Power Plants for Production of Animal Feeds (FE031717)  
Tryg Lundquist, MicroBio Engineering
- 2 PM** A Scalable Process for Upcycling Carbon Dioxide (CO<sub>2</sub>) and Coal Combustion Residues Into Construction Products (FE0031718)  
Gaurav Sant, University of California - Los Angeles
- 2:30 PM** **Break**
- 3 PM** Field Scale Testing of the Thermocatalytic Ethylene Production Process Using Ethane and Actual Coal Fired Flue Gas CO<sub>2</sub> (FE0031713)  
Amit Goyal, Southern Research Institute
- 3:30 PM** Life Cycle Analysis of Carbon Utilization Technologies at NETL  
Timothy Skone, NETL DOE
- 4 PM** Electrochemical CO<sub>2</sub> Conversion  
Douglas Kauffman, NETL DOE

Monday

Tuesday

Wednesday

Thursday 22nd

Friday  
No events

**CARBON UTILIZATION**

**9:45 AM** Welcome and Introduction  
Mark Ackiewicz, U.S. Department of Energy

**Panel on Testing Facilities**  
Moderator: Lynn Brickett

**10 AM** Wyoming Infrastructure Authority  
Jason Begger, Wyoming Integrated Test Center

**10:15 AM** National Carbon Capture Center  
John Northington, Southern Company

**10:30 AM** International Test Center Network  
Frank Morton, Southern Company

**10:45 AM** **Q&A**

Moderator: Dan Hancu

**11 AM** Evaluation of Concentrated Piperazine for CO<sub>2</sub> Capture from Coal-Fired Flue Gas and NGCC Conditions  
Gary Rochelle, The University of Texas at Austin

**11:30 AM** Validation of Transformational CO<sub>2</sub> Capture Solvent Technology with Revolutionary Stability  
Erik Mueleman, ION Engineering LLC

**12 PM** **Lunch**

Moderator: Joseph Stoffa

**12:30 PM** Field Scale Testing of the Thermocatalytic Ethylene Production Process Using Ethane and Actual Coal Fired Flue Gas CO<sub>2</sub>  
Amit Goyal, Southern Research Institute

**1 PM** A Scalable Process for Upcycling Carbon Dioxide (CO<sub>2</sub>) and Coal Combustion Residues into Construction Products  
Gaurav Sant, University of California, Los Angeles

**1:45 PM** Membrane-Integrated Sorbent Adsorption Process for Carbon Capture  
Gokhan Alptekin, TDA Research

**Panel Discussion on DAC and Utilization**  
Moderator: Amishi Kumar

**2:15 PM** Biofuels and Bioproducts  
Ian Rowe, Bioenergy Technologies Office

**2:30 PM** Strategic Analysis in Advanced Manufacturing  
Joe Cresko, Advanced Manufacturing Office

**2:45 PM** Carbon Conversion Technologies  
Phil De Luna, National Research Council of Canada

**3 PM** Renewable Chemical Technologies  
Randy Cortwright, National Renewable Energy Laboratory

**3:15 PM** Advanced Algal Systems  
Christy Sterner, Bioenergy Technologies Office

**3:30 PM** **Q&A**



Monday 26th

Tuesday

Wednesday

Thursday  
No event

Friday  
No event

### OFFSHORE

Moderator: William Fincham

- 1 PM** In-Situ Applied Coatings for Mitigating Gas Hydrate Deposition in Deepwater Operations  
Carolyn A. Koh, Colorado School of Mines
- 1:20 PM** Hexagonal Boron Nitrate Reinforced Multifunctional Well Cement for Extreme Conditions  
Rouzbeh Shahsavari, C-Crete Technologies
- 1:40 PM** Corrosion Resistant Aluminum Components for Improved Cost and Performance of Ultra-Deepwater Offshore Oil Production  
Glenn Grant, PNNL
- 2 PM** Assessing Current and Future Infrastructure Hazards  
TBD, NETL
- 2:20 PM** **Break**

Moderator: TBD

- 2:40 PM** Geohazards & Subsurface Uncertainty Modeling  
TBD, NETL
- 3 PM** Constraining Kick Signals through Advanced Multi-Phase Data  
TBD, NETL
- 3:20 PM** Infrastructure and Metocean Technology  
TBD, NETL
- 3:40 PM** Relative Permeability for Offshore EOR  
TBD, NETL
- 4 PM** **Break**
- 4:20 PM** CSEM for Geohazard identification  
TBD, NETL
- 4:40 PM** Overview of Well Cement Behavior and Gas Migration During Early Hydration  
TBD, NETL
- 5 PM** Thermodynamic modeling of mineral scale at HPHT  
TBD, NETL
- 5:20 PM** **Adjourn**

Monday

Tuesday 27th

Wednesday

Thursday  
No event

Friday  
No event

## HYDRATES

Moderator: Richard Baker

- 1 PM** Alaska Natural Gas Hydrate Production Testing: Test Site Selection, Characterization and Testing Operation  
Tim Collett, USGS
- 1:20 PM** Natural Gas Hydrates in Permafrost and Marine Settings: Resources, Properties, and Environmental Issues  
Carolyn Ruppel, USGS
- 1:40 PM** Behavior of Sediments Containing Methane Hydrate, Water, and Gas Subjected to Gradients and Changing Conditions  
Timothy Kneafsey, LBNL
- 2 PM** Numerical Studies for the Characterization of Recoverable Resources from Methane Hydrate Deposits  
George Moridis, LBNL
- 2:20 PM** **Break**

Moderator: Richard Baker

- 2:40 PM** Coupled Hydrologic, Thermodynamic, and Geomechanical Processes of Natural Gas Hydrate Production  
Mark White, PNNL
- 3 PM** Natural Gas Hydrate Research  
TBD, NETL
- 3:20 PM** **Adjourn**

Monday

Tuesday

Wednesday 28th

Thursday  
No event

Friday  
No event

NATURAL GAS INFRASTRUCTURE – MITIGATION AND NATURAL GAS INFRASTRUCTURE – QUANTIFICATION

Moderator: Eric Smistad

1 PM Resident Inline Robot for Leakage Inspection, Repair, and Prevention of Methane Emissions  
Aalap Shah, ULC Robotics

1:20 PM Methane Mitigation Thermoelectric Generator (MMTEG)  
Jeffrey Mays, GTI

1:40 PM Smart Methane Emission Detection System Development  
Heath Spidle, SwRI

2 PM Novel Signatures from Deployed Sensors for Natural Gas Transmission Pipelines  
Casie Davidson, PNNL

2:20 PM Break

Moderator: Eric Smistad

2:40 PM Robust Welding Repair Technology for Oil/Gas Pipelines  
Zhili Feng, ORNL

3 PM In-Situ Pipeline Coatings for Methane Emissions Mitigation and Quantification from Natural Gas Infrastructure  
Matthew Nakatsuka, Oceanit

3:20 PM Development of Advanced Pipeline Materials: Metallic Coatings and Composite Liners  
Margaret Ziomek-Moroz, NETL

3:40 PM Detecting Potential Natural Gas Pipeline Failure Via in-situ Sensor Platforms  
Ruishu Wright, Jagan Devkota, and Ping Lu, NETL

4 PM Break

4:20 PM Field-Based Quantification of Methane Emissions from Natural Gas Infrastructure  
Natalie Pekney and Matt Reeder, NETL

Monday 2nd

Tuesday

Wednesday

Thursday

Friday  
No event

# Schedule Pending

Monday

**Tuesday 3rd**

Wednesday

Thursday

Friday

No event

# Schedule Pending

Monday

Tuesday

Wednesday 4th

Thursday

Friday  
No event

# Schedule Pending

Monday

Tuesday

Wednesday

**Thursday 5th**

Friday  
No event

# Schedule Pending