NATIONAL ENERGY TECHNOLOGY LABORATORY

# CARBON CAPTURE PROJECT REVIEW MEETING
## Virtual Agenda
## October 5-7, 2020

## Monday, October 5, 2020

Moderator: TBD

**10:00 AM** **Introductory Remarks**
Angelos Kokkinos, U.S. Department of Energy

**10:30 AM** **Carbon Capture Program Overview**
Dan Hancu, National Energy Technology Laboratory

**11:00 AM** **Energy Efficient GO-PEEK Hybrid Membrane Process for Post-Combustion Carbon Dioxide Capture (FE0026383)**
Shiguang Li, Gas Technology Institute

**11:30 AM** **Electrochemically-Mediated Amine Regeneration in $CO_2$ Scrubbing Processes (FE0026489)**
T. Alan Hatton, Massachusetts Institute of Technology

**12:00 PM** **Rapid Design and Testing of Novel Gas-Liquid Contacting Devices for Post-Combustion $CO_2$ Capture Via 3D Printing: Modular Adaptive Packing (FE0031530)**
Nathan Fine, ION Clean Energy, Inc

**12:30 PM** **Lunch**

**1:00 PM** **Flue Gas Aerosol Pretreatment Technologies to Minimize PCC Solvent Losses (FE0031592)**
Devin Bostick, Linde, LLC

**1:30 PM** **A Process with Decoupled Absorber Kinetics and Solvent Regeneration through Membrane Dewatering and In-Column Heat Transfer (FE0031604)**
Kunlei Liu, University of Kentucky

**2:00 PM** **Inexpensive and Sustainable Anti-Corrosion Coating for Power Generation Applications (FE0031659)**
John Watkins, LumiShield Technologies, Inc.

**2:30 PM** **Break**

**2:45PM** **Validation of Transformational $CO_2$ Capture Solvent Technology with Revolutionary Stability (FE0031727)**
Erik Meuleman, ION Engineering, Inc

**3:15 PM** **Molecular Refinement of Transformational Solvents for $CO_2$ Separations (FWP-72396)**
David Heldebrant, Pacific Northwest National Laboratory

**3:45 PM** **Demonstration and Validation of Additively Manufactured Intensified Device for Enhanced Carbon Capture (FWP-FEAA375)**
Costas Tsouris, Oak Ridge National Laboratory

**4:15 PM** **Day 1 Concluding Remarks**

## Tuesday, October 6, 2020

Moderator: TBD

**10:30 AM** **FLECCS Program**
Scott Litzelman, ARPA-E

**11:00 AM** **Advanced Structured Adsorbent Architectures for Transformative CO2 Capture Performance, (FE0031732)**
Deborah Jelen, Electricore

**11:30 AM** **Amine-Appended Metal-Organic Frameworks as Switch-Like Adsorbents for Energy Efficient Carbon Capture (FWP-FP0006194)**
Jeffrey Long, Lawrence Berkeley National Laboratory

**12:00 PM** **High Performance Thin Film Composite Membranes for Post-Combustion Carbon Capture**
Lingxiang Zhu, National Energy Technology Laboratory

**12:30 PM** **Lunch**

**1:00 PM** **CCSI² Overview**
Benjamin Omell, National Energy Technology Laboratory

**1:05 PM** **Machine Learning Approaches to Accelerate CFD Analyses**
Dave Widemann and Brenda Ng, Lawrence Livermore National Laboratory, Grigorios Panagakos, National Energy Technology Laboratory

**1:30 PM** **Process Optimization of Advanced $CO_2$BOL Solvent Systems**
Joshua Morgan, National Energy Technology Laboratory

**2:00 PM** **Sorbent Based Post-Combustion $CO_2$ 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.

**3:15PM** **Gap Analysis for Modular Scale Pre-Combustion Carbon Capture**
Kathryn Smith, National Energy Technology Laboratory

**3:45 PM** **Alkanolamines for Acid Gas Removal in Gasification Processes (FWP-725646)**
Phillip Koech, Pacific Northwest National Laboratory

**4:15 PM** **Concluding Remarks: Day 2**

## Wednesday, October 7, 2020

Moderator: TBD

**10:00 AM** **Engineering Scale Testing of Transformational Non-Aqueous Solvent- Based $CO_2$ Capture Process at TCM (FE0031590)**
Marty Lail, Research Triangle Institute

**10:30 AM** **Scale-Up and Testing of Advanced Polaris Membrane $CO_2$ Capture Technology (FE0031591)**
Tim Merkel, Membrane Technology and Research

**11:00 AM** **Membrane-Sorbent Hybrid System for Post Combustion Capture (FE0031603)**
Gokhan Alptekin, TDA Research

**11:30 AM** **FOA 2187 & FOA 2188 Selections**
Lynn Brickett, U.S. Department of Energy

**12:00 PM** **Update on Carbon Capture Techno-Economic Analysis at NETL**
Tim Fout, National Energy Technology Laboratory

**12:30 PM** **Lunch**

**1:00 PM** **Life Cycle Analysis at NETL**
Tim Skone, National Energy Technology Laboratory

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| 1:45 PM | Government Panel on DAC<br>TBD |
| 2:45 PM | Break |
| 3:00 PM | Panel Discussion<br>TBD |
| 4:00 PM | Concluding Remarks |