

THURSDAY, SEPTEMBER 24

Location: Building: 26, Room: G51 Conference Complex

8:00–8:30 Registration and Breakfast

8:30–9:35 Welcome and Opening Remarks

Sean Plasynski – Acting Laboratory Director, NETL

John Lassek – Acting Principal Deputy Assistant Secretary and Deputy Assistant Secretary for Subsurface Energy, U.S. DOE Hydrocarbons and Geothermal Energy Office (HGEO)

Angelos Kokkinos – Acting Principal Deputy Director and Acting Chief Research Officer, NETL

Hydrocarbons and Geothermal Energy Office

Sarah Forbes – Director, Office of Coal, HGEO

Overview and Structure of Workshop

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

PORTFOLIO DEEP DIVE SESSION 1

9:35–9:55 Mining & Processing

Hema Siriwardane – Program Lead, Mining & Processing, NETL

9:55–10:15 Coal & Waste Gas to Products

Chris Matranga – Program Lead, Coal & Waste Gas to Products, NETL

10:15–10:35 Poster Session and Refreshment Break

PORTFOLIO DEEP DIVE SESSION 2

10:35–10:55 Gasification

Mehrdad Shahnam – Program Lead, Gasification, NETL

10:55–11:15 Capture

Dave Luebke – Program Lead, Capture, NETL

11:15–11:35 Coal Power

Anthony Burgard – Program Lead, Coal Power, NETL

11:35–11:55 Digital Engineering

Kirk Gerdes – Acting Associate Lab Director, Coal Center of Excellence, NETL



Mining & Processing



Conversion & Products



Power & Capture

11:55–12:00 Portfolio Deep Dive Closeout and Lunch Instructions

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

12:00–1:00 Group Photo, Lunch, and Poster Viewing

1:00–1:10 Regroup, Overview of Afternoon Agenda, Transition to Technical Breakout Rooms

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

1:15–2:15 TECHNICAL BREAKOUT SESSION 1

2:15–2:45 Poster Session and Refreshment Break

2:45–3:45 TECHNICAL BREAKOUT SESSION 2

3:45–4:15 Afternoon Refreshment Break

4:15–5:15 TECHNICAL BREAKOUT SESSION 3

5:20–5:30 Announcements, Preparation for Day 2, Closing Remarks

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

5:30 Badge Return and Departure

Registration Table



COAL CENTER *of* EXCELLENCE

Stakeholder Workshop

FRIDAY, SEPTEMBER 25

Location: Building: 26, Room: G51 Conference Complex

8:00–8:45 Registration and Continental Breakfast Poster Session

8:45–9:10 Welcome, Recap of Day 1, Preview of Day 2

Curt Coccodrilli – Acting Assistant Secretary and Principal Deputy Assistant Secretary, HGE0

Angelos Kokkinos – Acting Principal Deputy Director and Acting Chief Research Officer, NETL

Shaye Potter – Field Representative, Office of U.S. Senator Shelley Moore Capito

Kathryn Cromack – Legislative Director, Office of U.S. Senator Jim Justice

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

9:10–9:20 NETL Safety Video, Group Photo, and Tour Group Breakouts

9:20–11:20 TOUR OF NETL MORGANTOWN LABORATORY FACILITIES

Critical Minerals and Materials Research and Byproduct Extraction from Hydrocarbon Energy Wastes

Visualization Center, B3

Aimee Curtright, Fan Shi, and Mengling Stuckman

NETL develops technologies to recover critical minerals and rare earth elements from U.S. coal and hydrocarbon wastes. Through tailored extraction methods and multi-institution initiatives like METALLIC and ProMMiS, research accelerates domestic supply chain development, optimizes processes, derisks commercialization, and enhances resource sustainability.

Multiphase Flow Science and Scale-Up Testing for Coal Conversions

Modular Multipurpose
Reactor, B4

Mehrdad Shahnam and Steve Rowan

NETL creates advanced multiphase computational fluid dynamics models validated by cold-flow experiments to optimize reactor dynamics. These validated models accelerate the scale-up of process-intensified conversion technologies, improve dynamic operability during transitions, reduce operational risks, and enable high-efficiency carbon conversion.

Advanced Integrated Energy Systems

Hybrid Performance
Project, B4,
Control Room

David Tucker

NETL's Integrated Energy Systems Facility uses cyber-physical systems to improve power plant resiliency and flexibility. By combining thermal and chemical storage with power generation and chemical production, the facility significantly improves ramp rates, minimizes fuel modulation, and optimizes control strategies to protect generation assets.

Coal and Carbonaceous Feedstock Conversion (ReACT Facility)

ReACT Facility, B14

Dushyant Shekhawat

The ReACT facility advances modular, microwave-driven thermochemical processes to convert coal, waste coal, and carbonaceous feedstocks into fuels, chemicals, and materials. By enabling process intensification, targeted catalyst design, and flexible reactor development, ReACT lowers technical risks and speeds commercial deployment of low-carbon conversion technologies.

Flexible Reactor System for Advanced Coal Conversion and Gasification

Fluidized Bed
Reactor Lab, B13

Jarrett Riley

NETL's Solid Fuel Fluidized Bed Reactor evaluates chemical looping gasification, fuel pyrolysis, and in-situ tar reforming. This adaptable system tests diverse feedstocks – including coal, biomass, and waste – to optimize kinetics, maximize syngas yields, and advance high-efficiency conversion technologies.

Optical Sensors and Novel Waveguides for Harsh-Environment Sensing

Laser and Optical
Processes Lab,
B25-102

Michael Buric

The Laser and Optical Processes Laboratory develops advanced optical sensors, single-crystal fibers, and hollow-capillary waveguides for real-time monitoring in extreme, high-temperature environments. These sensing technologies provide subsecond gas analysis and ultrahigh-temperature measurement to improve process control, safety, and operational reliability.

11:20–11:40 Poster Session Break

11:40–12:40 Summary from Technical Breakout Sessions and Industry Comments

Center of Excellence Program Leads

12:40–12:45 The Path Forward: Steps to Collaboration

Nate Weiland – Acting Technical Director, Coal Center of Excellence, NETL

12:45–12:50 Final Remarks and Adjourn

Curt Coccodrilli – Acting Assistant Secretary and Principal Deputy Assistant Secretary, HGE0

12:50–1:20 Boxed Lunches

1:20

Badge Return and Departure

Registration Table