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# Carbon Ore, Rare Earth and Critical Minerals (CORE-CM) Initiative

## Powder River Basin

57	58	59	60	61	62	63	64	65	66	67	68	69	70	71
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# Agenda

**Powder River Basin CORE-CM Annual Forum**  
**August 31 - September 1, 2022**  
**Gillette College Technical Education Center | Gillette Wyoming**

### WEDNESDAY, AUGUST 31

#### Optional Tours and Activities

2:00 - 2:45 PM

#### Wyoming Innovation Center (WyIC) Tour

Led by **Jim Ford**, Founder - Waypoints Wyoming; Energy and Industry Advisor to Campbell County Wyoming Commission  
 10 Innovation Dr, Gillette, WY 82716

3:15 - 4:15 PM

#### Area 59 Facility Tour

Led by **Jan Folland**, Area 59 Secondary Education Coordinator  
 3207 S Douglas Hwy, Gillette, WY 82718

4:30 - 6:00 PM

#### Gillette College Facility Tours

Led by:  
**Travis Grubb**, Dean of Career and Technical Education, Gillette Community College  
**Mark Andersen**, Director of Facilities, Gillette Community College  
 Gillette College Technical Education Center, 3251 South 4-J Road, Section A,  
 Gillette WY, 82718

6:00 - 8:00 PM

#### Networking Mixer followed by Dinner

Gillette College Technical Education Center  
 Sponsored by Ramaco and Rare Element Resources, Ltd.



## THURSDAY, SEPTEMBER 1

7:15 - 8:00 AM

Breakfast

8:00-10:15 AM

**PLENARY SESSION**

8:00 - 8:20 AM

Welcome Remarks

Dr. Holly Krutka

Executive Director, School of Energy Resources

Dr. Erin Phillips

Project Manager, Center for Economic Geology Research  
School of Energy Resources

8:20 - 9:35 AM

Keynote Speakers:

Dr. Kelly Rose, Technical Director, Science-based AI/ML Institute (SAMI)  
National Energy Technology Laboratory, Research & Innovation Center

Dr. Glen Murrell, Executive Director  
Wyoming Energy Authority

Mr. Tom Kaiserski, Manager, Industry Development Program  
Montana Department of Commerce, Research and Information Services Bureau

Mr. Jim Atchison, Executive Director  
Southeastern Montana Development Corporation

9:35 - 10:15 AM

Project Update Lightning Talks from Task/Sub-task Leads

10:15 - 10:45 AM

Networking Break

*Sponsored by Dry Fork Mine and Talen Energy*



10:45 -11:45 AM

## Discussion Session 1

**Session 1a: Advanced mining techniques for rare earth elements and critical minerals (Technology Center, Flex Space)**

Chair: **Dr. Fred McLaughlin**, Director, Center for Economic Geology Research  
University of Wyoming School of Energy Resources

Co-Chair: **Brent Goehring**, Research Scientist, Los Alamos National Laboratory

Co-Chair: **Dave Green**, Project Engineer, Western Fuels-Wyoming Inc., Dry Fork Mine

**Session 1b: Technology workforce development and environmental and social justice (Technology Center, Room 213)**

Chair: **Selena Gerace**, Research Scientist, Center for Economic Geology Research and  
Center for Energy Regulation and Policy Analysis  
University of Wyoming School of Energy Resources

Co-Chair: **Phil Christopherson**, CEO, Energy Capital Economic Development

Co-Chair: **Janell Oberlander**, President  
Gillette College

11:45 AM -12:45 PM

## Lunch

*Sponsored by Gillette College*



12:45 -1:45 PM

## Discussion Session 2

**Session 2a: Carbon ore to products (Technology Center, Flex Space)**

Chair: **Scott Quillinan**, Senior Director of Research  
University of Wyoming School of Energy Resources

Co-Chair: **Aurelia S. Giacometto**, Independent Director of Ramaco Resources

### Student Lightning Talk:

*"Understanding the electrochemical properties of coal-derived carbon fibers from experiment and computational modeling"*

Mr. Robert E. F. Cincotta and Mr. Mohammad Masirul Afroz  
PhD students in the UW Department of Chemical Engineering

**Session 2b: Basin-wide infrastructure and supply chain considerations (Technology Center, Room 213)**

Chair: **Kipp Coddington**, Senior Advisor  
University of Wyoming School of Energy Resources

Co-Chair: **Stephanie Salazar**, Executive Director  
Upton Economic Development Board

Co-Chair: **Tom Kaiserski**, Manager, Industry Development Program, Montana  
Department of Commerce, Research and Information Services Bureau

2:00 - 3:00 PM

**Discussion Session 3**

**Session 3a: Rare earth element and critical mineral utilization and downstream manufacturing (Technology Center, Flex Space)**

Chair: **Dr. Fred McLaughlin**, Director, Center for Economic Geology Research  
University of Wyoming School of Energy Resources

Co-Chair: **Sam Pierce**, Senior Geologist, Western Rare Earths

Co-Chair: **Ryan Davison**, Associate Professor and Research Geologist,  
Montana Bureau of Mines and Geology, Montana Tech

**Student Lightning Talk:**

*"Distribution of ion-exchangeable rare earth elements and critical minerals in coal-hosted clays of the Powder River Basin, WY"*

**Ms. Sophia Stuart**

MS student in the UW Department of Geology & Geophysics

**Session 3b: Utilization of waste products for rare earth element and critical mineral recovery (Technology Center, Room 213)**

Chair: **Charles Nye**, Associate Research Scientist,  
University of Wyoming School of Energy Resources

Co-Chair: **Steve Sutliff**, Sr. Project Manager, Talen Major Projects, Talen Energy

Co-Chair: **Gordon Criswell**, Environmental Manager, Colstrip Station, Talen Energy

**Student Lightning Talk:**

*"Investigating Rare Earth Elements in Sedimentary Basins"*

**Ms. Ellen Polites**

PhD student in the UW Department of Geology & Geophysics

3:15 - 4:15 PM

**Discussion session 4**

**Session 4a: Rare earth element and critical minerals extraction and processing (Technology Center, Flex Space)**

Chair: **Scott Quillinan**, Senior Director of Research  
University of Wyoming School of Energy Resources

Co-chair: **Morgan Volker Evans**, Principal Research Scientist, Energy Division, Battelle

Co-chair: **Randy Scott**, President and Chief Executive Officer  
Rare Element Resources

4:15 - 4:30 PM

**Concluding Remarks and Adjourn**