



**RARE EARTH ELEMENTS  
AND CRITICAL MINERALS  
PROJECT REVIEW MEETING  
Virtual Agenda  
September 15-16, 2020**

**Tuesday, September 15, 2020**

Moderator: Mary Anne Alvin, National Energy Technology Laboratory

- 10:30 AM**      **Program Overview**, Mary Anne Alvin, National Energy Technology Laboratory
- 11:00 AM**      **Pilot-Scale Testing of an Integrated Circuit for the Extraction of Rare Earth Mineral and Elements from Coal and Coal By-Products Using Advanced Separation Technologies**  
Rick Honaker, University of Kentucky
- 11:30 AM**      **High Yield and Economic Production of Rare Earth Elements from Coal Ash**  
Dorin Preda, PSI
- 12:00 PM**      **Development and Testing of an Integrated AMD Treatment and Rare Earth/Critical Mineral Plant**  
Paul Ziemkiewicz, West Virginia University
- 12:30 PM**      **LUNCH**
- 1:00 PM**        **Rare Earth Element Extraction and Concentrate at Pilot-Scale from North Dakota Coal-Related Feedstocks**  
Nolan Theaker, University of North Dakota
- 1:30 PM**      **Demonstration of Scaled-Production of Rare Earth Oxides and Critical Minerals from Coal-Based Sources Using Innovative, Low Cost Process Technologies and Circuits**  
Rick Honaker, University of Kentucky
- 2:00 PM**      **Low Temperature Reduction of Rare Earth Metals Using Ionic Liquids**  
Holly Garich, Faraday
- 2:30 PM**      **ADJOURN**

**Wednesday, September 16, 2020**

Moderator: Mary Anne Alvin, National Energy Technology Laboratory

- 10:30 AM      Silicon-Calcium Based Reduction of Rare Earth Oxides**  
Xiaobiong Xie, Materials Research, LLC
- 11:00 AM      Rare Earth Elements from Coal and Coal By-Products - Embedded Demand Database and Economics**  
Morgan Summers, National Energy Technology Laboratory
- 11:30 AM      Evaluation of Laser-Based Analysis of Rare Earth Elements in Coal-Related Materials**  
Sam Clegg, Los Alamos National Laboratory
- 12:00 PM      Rare Earth Elements from Coal and Coal By-Products - Separations Technology**  
Christina Lopano, Circe Verba, National Energy Technology Laboratory
- 12:30 PM      LUNCH**
- 1:00 PM        Evaluation of Novel Strategies and Processes for Separation of Rare Earth Elements for Coal-Related Materials**  
George Goff, Los Alamos National Laboratory
- 1:30 PM        Rare Earth Elements from Coal and Coal By-Products - Geospatial Sedimentary Modeling**  
Kelly Rose, National Energy Technology Laboratory
- 2:00 PM        Application of Biosorption from REE Recovery from Coal By-Products**  
Yongqin Jiao, Lawrence Livermore National Laboratory
- 2:30 PM        New Sensing Mechanisms for Rare Earth Detection in Coal and Coal By-Product**  
Yoshiko Fujita, Idaho National Laboratory
- 3:00 PM        ADJOURN**