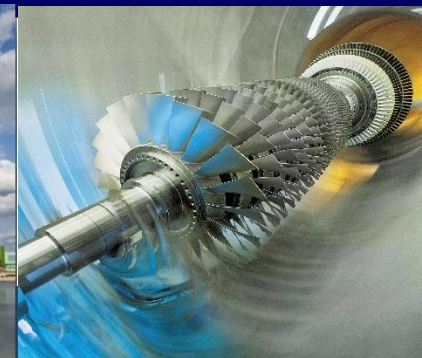


U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Fossil Energy



# 2021 Crosscutting Research and Advanced Energy Systems Project Review Meeting

**Angelos Kokkinos**

Associate Deputy Assistant Secretary  
for Clean Coal and Carbon  
Management

April 26, 2021

# DIVISION OF MINERALS SUSTAINABILITY – CRITICAL MINERALS, RARE EARTH ELEMENTS AND CARBON ORE TO PRODUCTS

Enable an environmentally and economically sustainable resource recovery industry in the United States that will support growth in the manufacturing industry while protecting the environment.

## Division of Minerals Sustainability



- Includes the CM/REE and Advanced Coal Processing legacy programs
- Working closely International Affairs on international issues and coordinates with EERE's AMO on DOE-wide efforts
- Actively participating in the National Science and Technology Council (NSTC) Subcommittee on Critical Minerals



# CARBON ORE TO PRODUCTS: OPPORTUNITIES TOWARD A CLEAN ENERGY TRANSITION

- Advanced processing of carbon ore and associated by-products
  - Developing transformational technologies to enable domestic manufacturing of strategic materials
- Building and infrastructure produce have lower emissions, improved performance, and better lifecycle for new and existing products in the market.
- Feedstock upgrading to recover waste particles for high value specialty products
- Environmental, Safety & Health analysis is performed on these products to ensure that they can safely be used.

## Funding Opportunity Recently Announced:

***DE-FOA-0002405, Advanced Coal Waste Processing: Production of Coal-Enhanced Filaments or Resins for Advanced Manufacturing and Research and Development of Coal-Derived Graphite***



# CARBON ORE TO PRODUCTS PROGRAM MOVING FORWARD

*Focus on utilizing materials to be recycled from previously mined resources outside of traditional thermal and metallurgical markets that can contribute to the U.S. gross domestic product*

Program will further efforts for the development of existing and new technologies and identify projected markets for everyday and high value stream carbon products generated predominantly from coal waste and refuse

- 60 billion tons of coal refuse from 200+ years of mining

Encourage job creation to ensure that the cost of the energy transition does not disproportionately affect fossil fuel communities.

Ensure the health and safety of the environment and people around the use and disposal of carbon-based products

