EXPANDING THE U.S. COAL VALUE CHAIN

Creating new jobs, products, and markets for coal

EXTRACTING THE FULL VALUE OF COAL RESOURCES

Coal Beneficiation at NETL focuses on both enhancing the value of coal as a feedstock and developing new, high-value products derived from coal.

GROWING COAL MARKETS & THE VALUE CHAIN

COAL BENEFICIATION HAS THREE PRIMARY R&D AREAS:

COAL TO CARBON PRODUCTS
Produces cost-competitive, high-value carbon fibers and nanomaterials for structural materials, 3D printing materials, energy storage and electrode materials, carbon composites, and other non-traditional materials.

FEEDSTOCK UPGRAADING
Expands markets for power generation and steelmaking with new coal cleaning, treatment, and processing technologies.

COAL PROPERTIES DATABASE
Enables coal suppliers and power plant operators to estimate the economic impacts of coal properties and compositions on the efficiency, reliability, and emissions of both existing and new power-generation facilities.

SPURRING INNOVATION

NETL RIC PROJECTS

Coal-Based Carbon Materials Manufacturing
National Energy Technology Laboratory Research and Innovation Center – Pittsburgh, PA
TOTAL: $1,150,000 • DOE SHARE: $1,150,000

Converting Coal into Carbon Nanomaterials and Composites
Ramaco Carbon – Davidson, KY
Public-private partnership

Transforming Coal into High-Value Products
Russell County Industrial Development Authority and Virginia Carbonite – Russell Co, VA
Public-private partnership

Technical Economic Analysis of the U.S. Value-Added Coal Product Industry
Oak Ridge National Laboratory – Oak Ridge, TN
TOTAL: $300,000 • DOE SHARE: $300,000

U.S. Coal to Conductive Inks
Minus 100, LLC – Clarks Summit, PA
TOTAL: $224,813 • DOE SHARE: $224,813

Pilot-Scale Testing of the Hydrophobic-Hydrophilic Separation Process to Produce Value-Added Products from Waste Coal
The Minerals Refining Company – Richmond, VA
TOTAL: $2,500,000 • DOE SHARE: $2,000,000

Efficient Process for the Production of High Conductivity, Carbon-Rich Materials from Coal
Physical Sciences, Inc. – Andover, MA
TOTAL: $224,985 • DOE SHARE: $224,985

High-Value Carbon Products from Domestic Coal
ATS-MER, LLC – Tucson, AZ
TOTAL: $224,997 • DOE SHARE: $224,997

Coal Core Composites for Low Cost, Light Weight, Fire Resistant Panels and Roofing Materials
Semplastics EHC, LLC – Oviedo, FL
TOTAL: $224,880 • DOE SHARE: $224,880

The Novel charfuel® Coal Refining Process 18 TPD Pilot Plant Project for Co-Producing an Upgraded Coal Product and Commercially Valuable Co-Products
CarbonFuels, LLC – Denver, CO
TOTAL: $3,180,519 • DOE SHARE: $2,000,000

CONTRACTS

HQ PROGRAM MANAGER
REGIS CONRAD

TECHNOLOGY MANAGER
JOHN ROCKEY

TECHNICAL PORTFOLIO LEAD
CHRISTOPHER MATRANGA