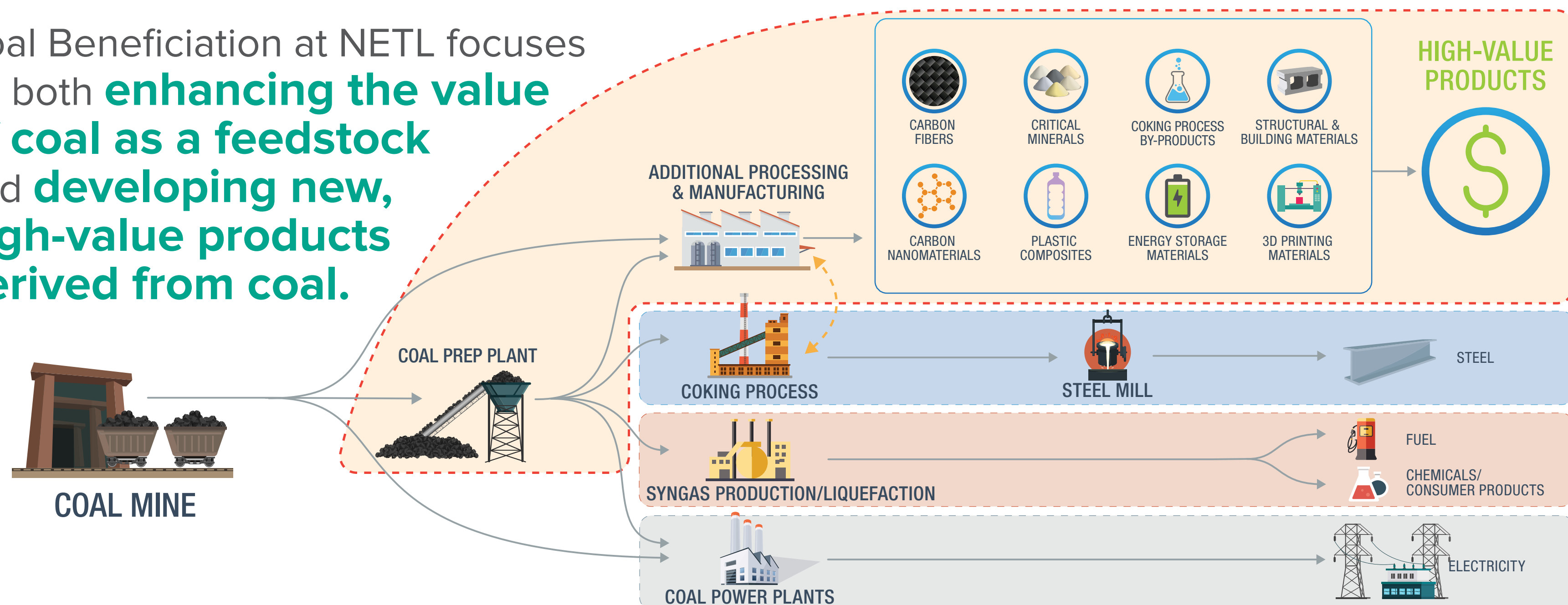


EXPANDING THE U.S. COAL VALUE CHAIN

Expanding markets for coal and promoting manufacturing of high-value carbon products

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.**



CONTACTS

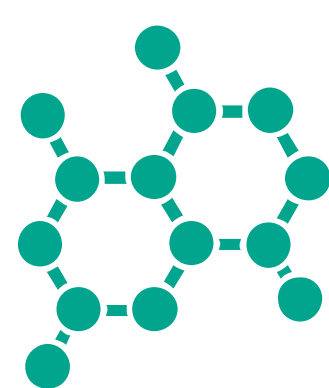
HQ PROGRAM MANAGER
REGIS CONRAD

TECHNOLOGY MANAGER
JOHN ROCKEY

TECHNICAL PORTFOLIO LEAD
CHRISTOPHER MATRANGA

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 UPGRADING

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, Morgantown WV, Albany, OR
TOTAL: \$1,150,000 • DOE SHARE: \$1,150,000
- Converting Coal into Carbon Nanomaterials and Composites**
Ramaco Carbon – Sheridan, WY
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

- COOPERATIVE AGREEMENT
- SBIR GRANT

