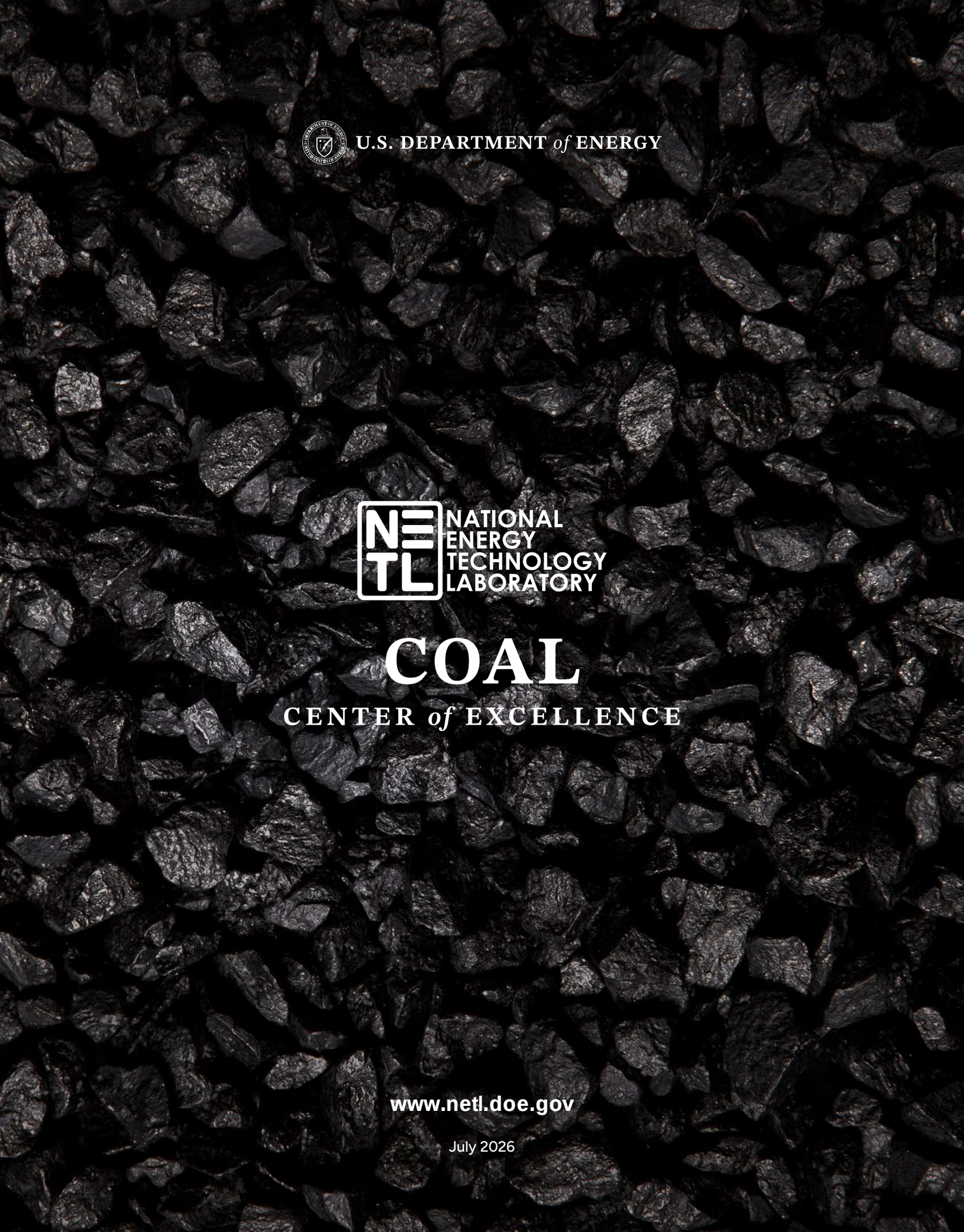

U.S. DEPARTMENT of ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY
COAL
CENTER of EXCELLENCE
www.netl.doe.gov
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COAL

CENTER *of* EXCELLENCE

The National Energy Technology Laboratory (NETL) Centers of Excellence (CoE) advance applied research and technology solutions crucial for affordable, reliable, and secure energy. Aligned with the strategic goals and priorities of the U.S. Department of Energy (DOE) and the Hydrocarbons and Geothermal Energy Office, the Coal CoE advances and expands the efficient production and use of coal resources. Through R&D and strategic partnerships, the Coal CoE helps to stabilize, optimize, and grow the American coal industry, restoring it as a cornerstone of the nation's energy ecosystem. Activities in the CoE are aligned with three major divisions: Mining and Processing, Conversion and Products, and Power and Capture.



Mining and Processing

Improving Coal Mining Competitiveness

This division helps stabilize coal mining production by applying super intelligence and machine learning analysis to investigate automated or roboticized subsurface mining. It also extends NETL's resource valuation toolset for low grade coal and coal waste to include power production and coal processing technologies. Finally, it seeks to grow domestic coal mining potential by investigating novel technologies for accessing currently uneconomic or unmineable coal seams.



Conversion and Products

Developing Supply Chains

This division aims to grow coal sales by creating new demand for coal as a manufacturing feedstock for fuels, chemicals, graphite, and other valuable solid carbon products. Additionally, it develops domestic supply chains for essential carbon materials that are currently imported. Beyond the materials, this division also helps increase coal mining revenue by utilizing mining waste as a feedstock.



Power and Capture

Strengthening Energy Competitiveness

This division seeks to improve the economic viability and deployment readiness of both coal-based power and point source carbon capture technologies. Coal-to-power research aims to modernize the existing U.S. coal fleet and develop next-generation plant designs to achieve superior efficiency, reliability, and competitiveness. Key focuses of capture research will be developing robust tools for business case analysis, enhancing validation and verification of capture technologies, and accelerating the development and deployment of advanced capture materials and processes.

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NETL's Centers of Excellence are a keystone of DOE's strategy to secure the nation's energy future. By pairing R&D capabilities with partnerships across U.S. industry, the Coal CoE is helping to support the growth and optimization of coal production, utilization, and power generation to establish a more affordable, reliable, and secure future of American energy. **For more information, see www.netl.doe.gov or contact Coal@netl.doe.gov**.