Analytical Strategies for Reliable and Affordable Energy Transition and Beyond

NETL provides comprehensive integrated analyses of mitigation, capture, utilization and storage of carbon emissions across the energy value chain.

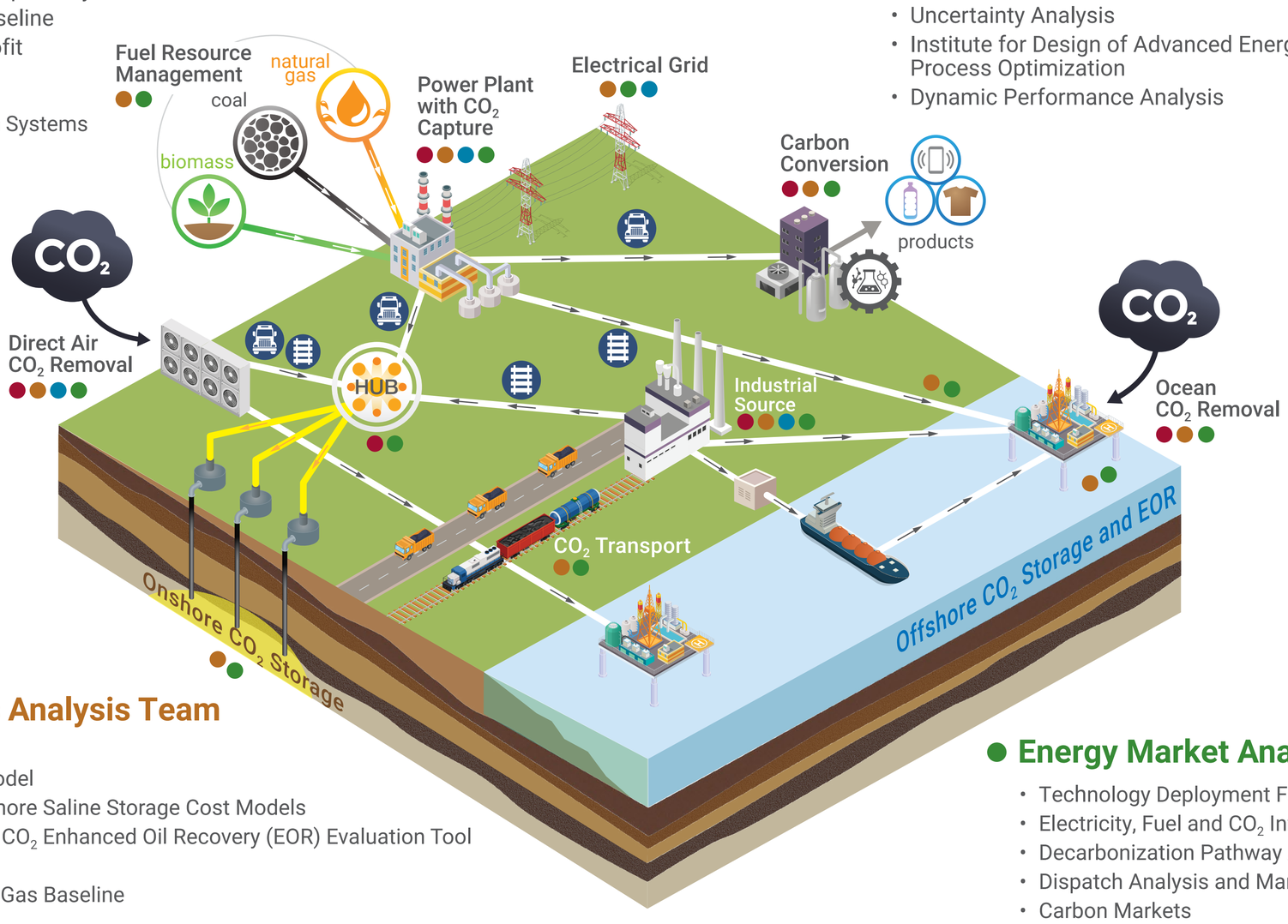
Energy Process Analysis Team

Performance and Cost Estimation

- Baseline Studies of Capture Systems
- Direct Air Capture Baseline
- Carbon Capture Retrofit Database (CCRD)
- Techno-economics of Carbon Conversion Systems

Process Systems Engineering Team

- Carbon Capture Simulation for Industry Impact (CCSI^2) Process Models and Tools
- Uncertainty Analysis
- Institute for Design of Advanced Energy Systems (IDAES) Process Optimization
- Dynamic Performance Analysis



Energy Systems Analysis Team

Subsurface Analysis

- CO_2 Transport Cost Model
- CO_2 Onshore and Offshore Saline Storage Cost Models
- Onshore and Offshore CO_2 Enhanced Oil Recovery (EOR) Evaluation Tool

Life Cycle Analysis

- Electricity and Natural Gas Baseline
- Carbon Accounting
- Methane Emissions
- Carbon Conversion Life Cycle Analysis
- CO_2 EOR Life Cycle (CELiC) Model

Transport by Road **Transport by Rail**

Energy Market Analysis Team

- Technology Deployment Forecasting
- Electricity, Fuel and CO_2 Infrastructure Analysis
- Decarbonization Pathway Analysis
- Dispatch Analysis and Market Design
- Carbon Markets
- Economic Impacts
- Policies/Regulation Analysis
- Financial Analysis

NETL-SSAE is involved in all parts of the carbon management value chain.

NETL's Strategic Systems Analysis and Engineering (SSAE) exhibits multidisciplinary teams specializing in the following:

- Process Cost Engineering Team evaluating the techno-economics of carbon capture and conversion technologies.
- Process Systems Engineering Team exploring advanced carbon capture processes and systems and developing open-source tools with cutting-edge optimization techniques.

Energy Systems Analysis:

- Subsurface Analysis Team investigating the transport and storage of captured carbon with pioneering cost models.
- Life Cycle Analysis Team specializing in cradle-to-grave emissions accounting and analysis.
- Energy Markets Team assessing the competitiveness of decarbonization technologies, contributing to the prestigious Energy Modeling Forum and the North American Electricity Reliability Council.

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