

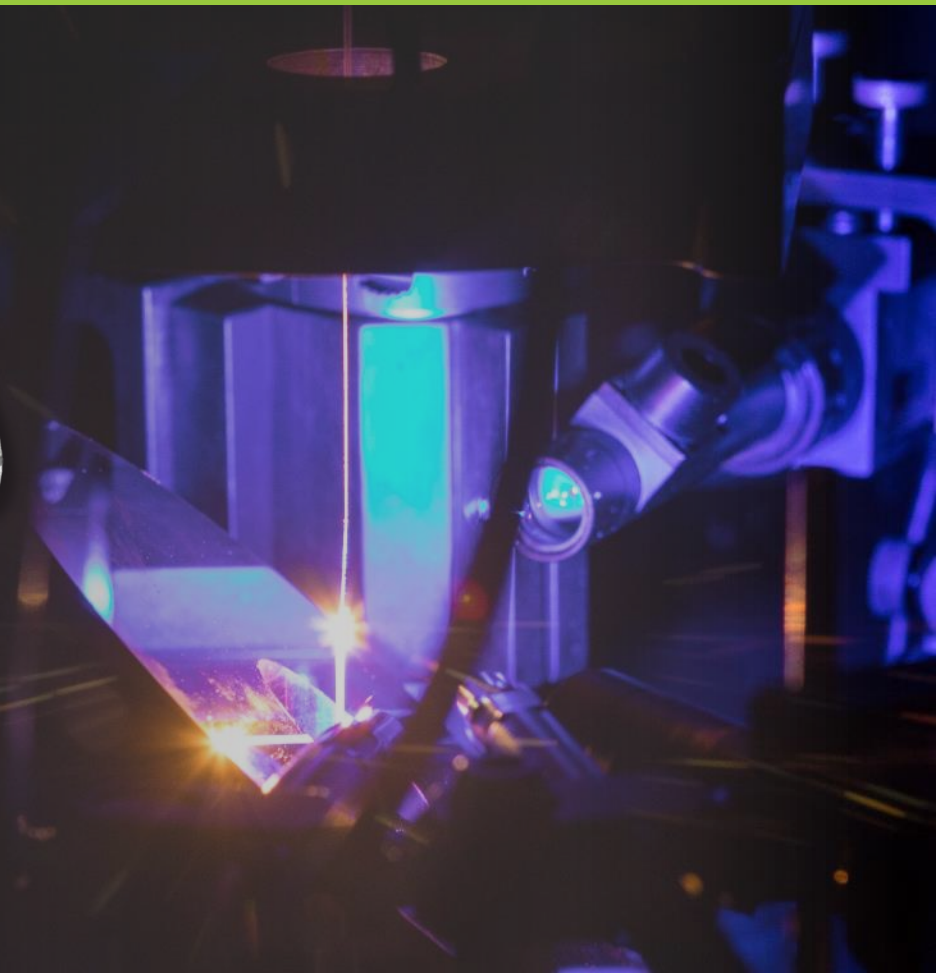
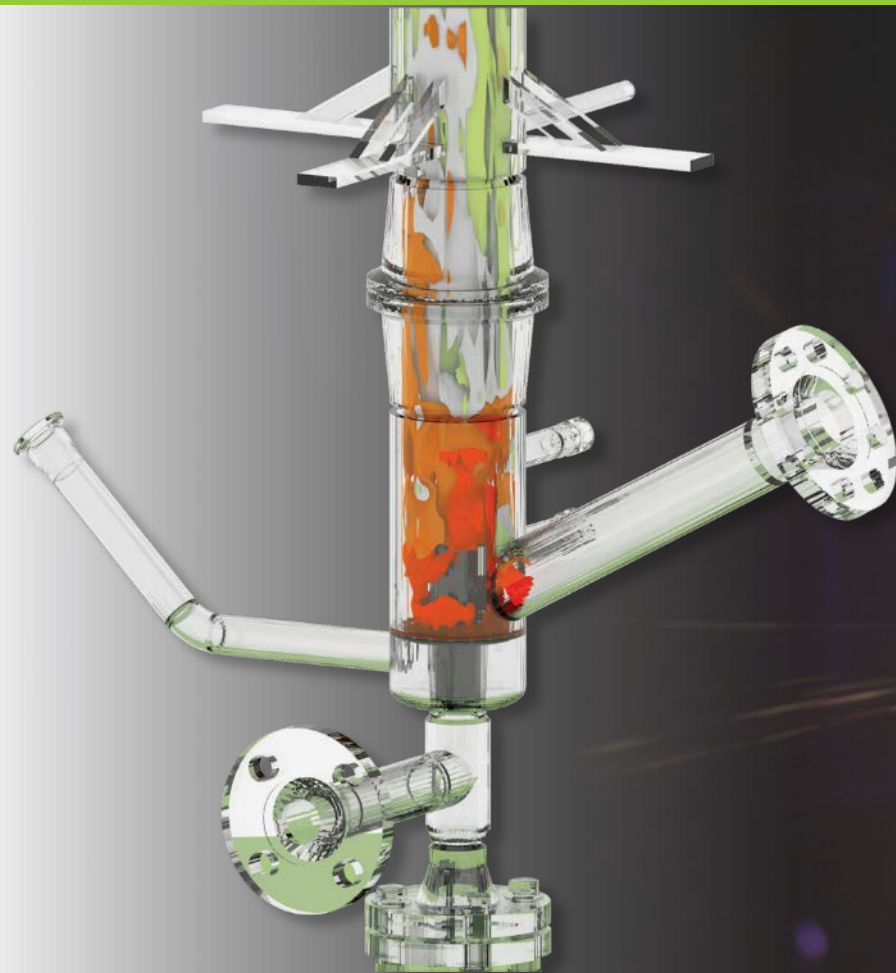
NETL Mission & Activities



NETL Webinar on FE's Minority Serving Institutions Program

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Technology Manager, University Training and Research



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MISSION

Discover, integrate and mature technology solutions to enhance the Nation's energy foundation and protect the environment for future generations

- Effective Resource Development
- Efficient Energy Conversion
- Environmental Sustainability

VISION

Be the Nation's renowned fossil-energy science and engineering resource, delivering world-class technology solutions today and tomorrow

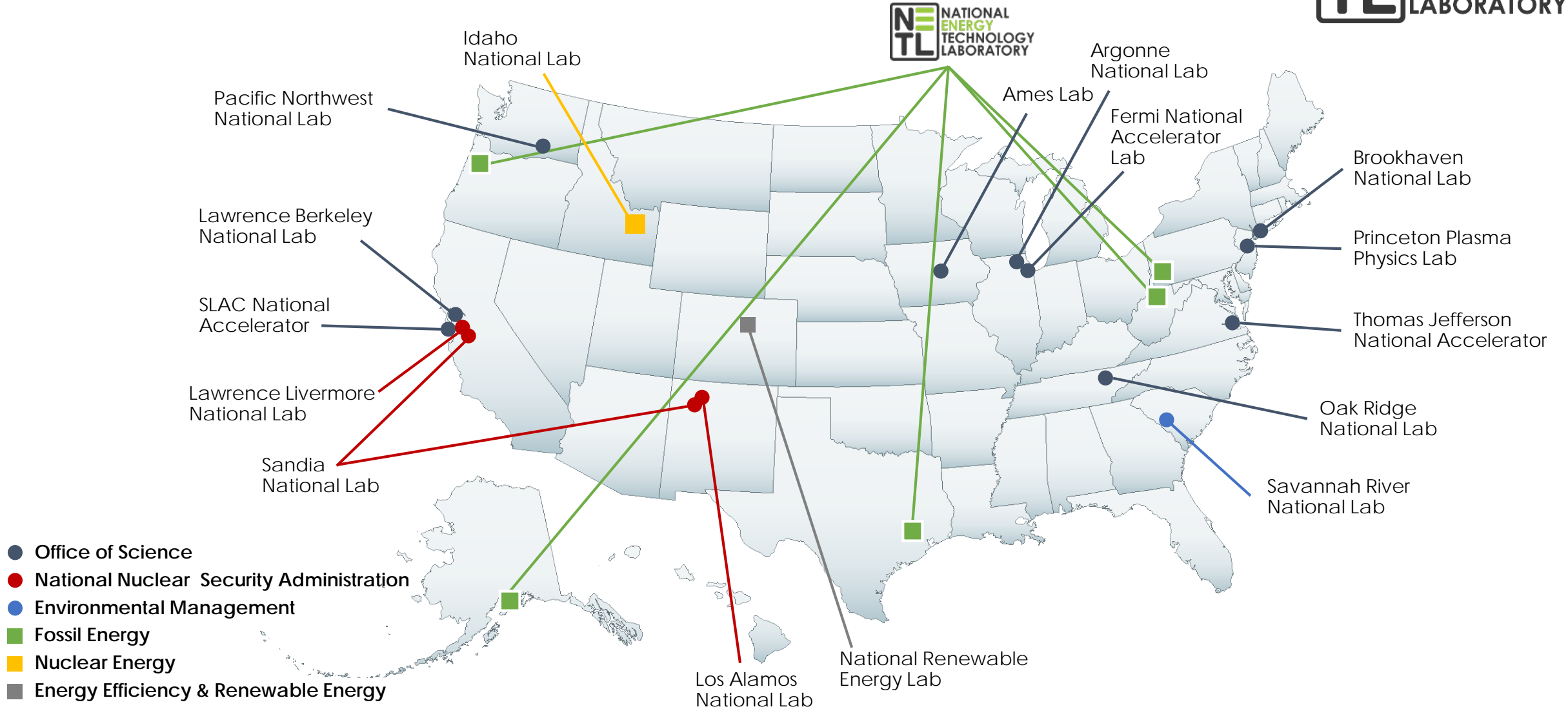
- Technology Convener
- Knowledge and Technology Generation Center
- Responsible Steward



U.S. DEPARTMENT OF
ENERGY



The National Laboratory System



Research Focus by Site

Multiple Sites Operating as 1 LAB System



OREGON

- Materials Performance
- Multi-environment Materials Characterization
- Alloy Development/Manufacture
- Geospatial Data Analysis



PENNSYLVANIA

- Process Systems Engineering
- Decision Science
- Functional Materials
- Environmental Sciences
- Energy Systems Optimization



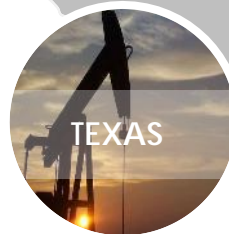
WEST VIRGINIA

- Energy Conversion Devices
- Modeling, Simulation and Analysis
- In-Situ Materials Characterization
- Supercomputer Infrastructure
- Diagnostics, Sensors, and Controls



ALASKA

Oil and Gas Strategic Office



TEXAS

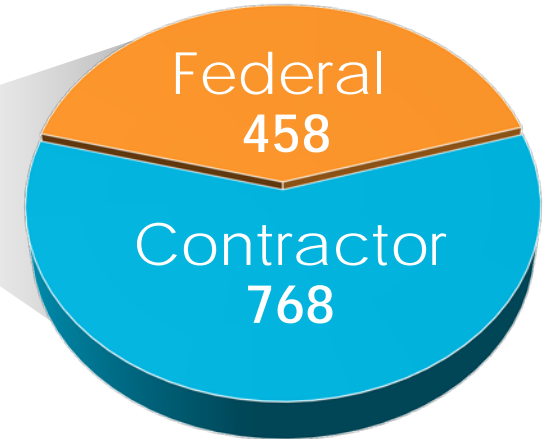
Oil and Gas Strategic Office

By the Numbers

- 3 labs across the U.S.
- 900+ R&D projects in 50 states
- \$6.3B total award value
- \$991M FY19 budget

Workforce

- 1,226 Full Time Equivalent Employees (FTEs)
- 70 Joint Faculty
- 109 Postdoctoral Researchers
- 54 Graduate Students
- 40 Undergraduate Students



NETL possesses an array of authorities to manage & implement complex R&D programs

- Program planning, development, and execution
- Legal, Financial, Procurement and Head of Contracting Authority (HCA)
- Project Management Expertise

NETL Budget



FY19 Budget/FY20 CR \$991M

Coal Program

Carbon Capture	\$101M
Carbon Storage	\$ 98M
Adv. Energy Systems	\$130M
Crosscutting	\$ 56M
NETL Coal R&D	\$ 36M
Rare Earth Elements	\$ 18M
STEP	\$ 22M
Transform. Coal Pilots	\$ 25M

Oil & Gas Program

Natural Gas Tech.	\$ 51M
Unconvent. FE Tech.	\$ 46M

FE Program Support

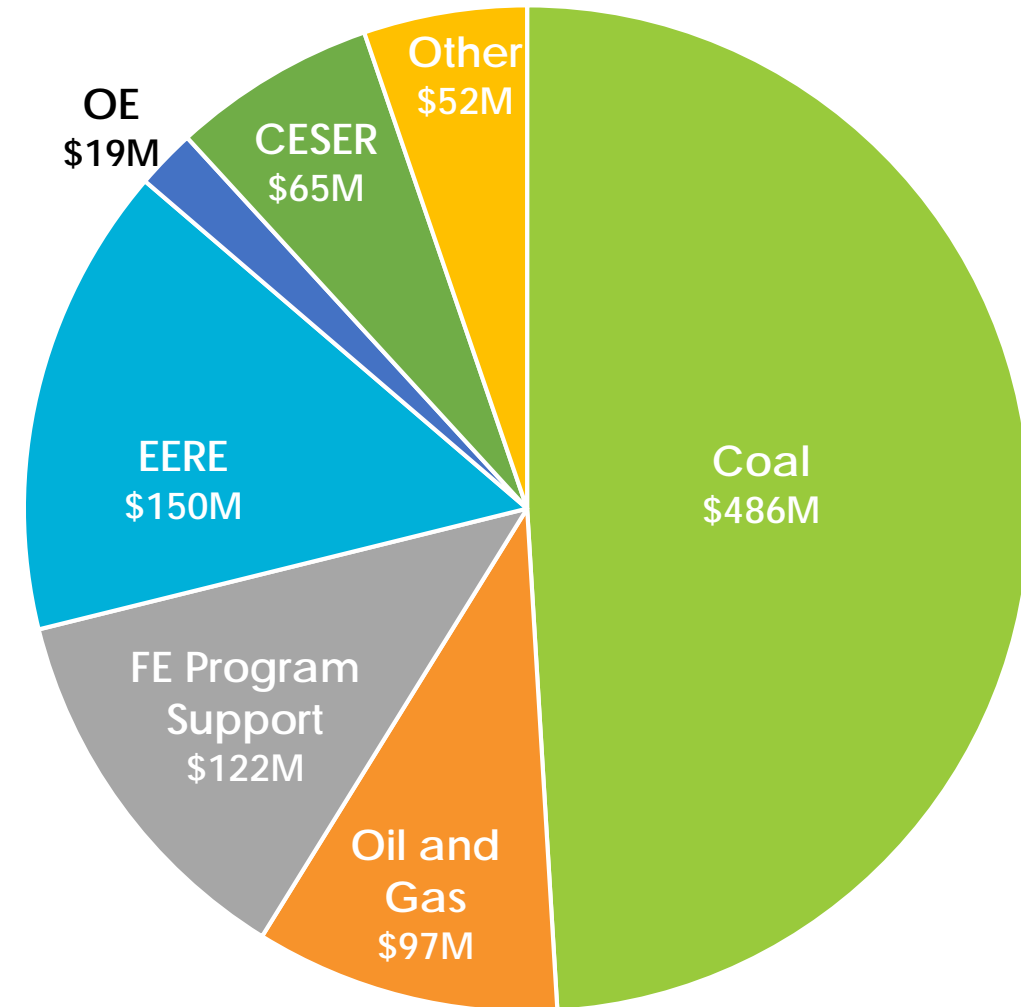
Program Direction	\$ 27M
NETL Research & Ops.	\$ 50M
NETL Infrastructure	\$ 45M

Non-Fossil Programs

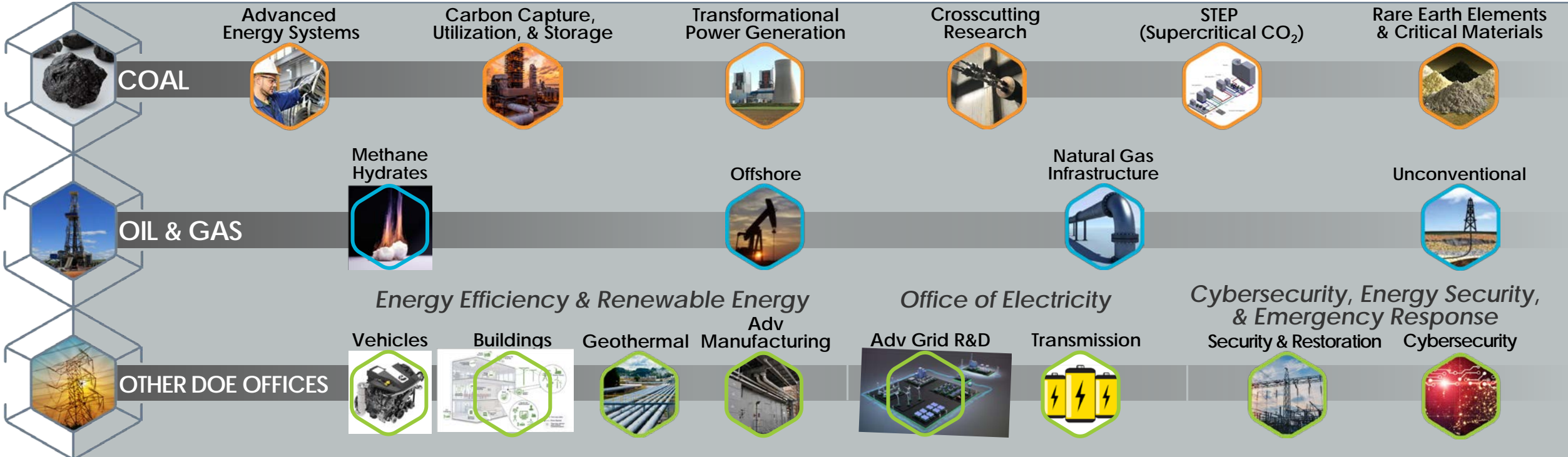
EERE	\$150M
OE	\$ 19M
CESER	\$ 65M

Strategic Partnerships

Other	\$ 52M
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Core Competencies & Technology Thrusts



Technology Development Pathway

An Active Portfolio from Concept to Market Readiness

COMMERCIALIZATION

Technology available for wide-scale deployment

TRL 9

DEMONSTRATION

System demonstrated in operational environment

TRL 8

SYSTEM TESTING

System performance confirmed at pilot-scale

TRL 6-7

DEVELOPMENT

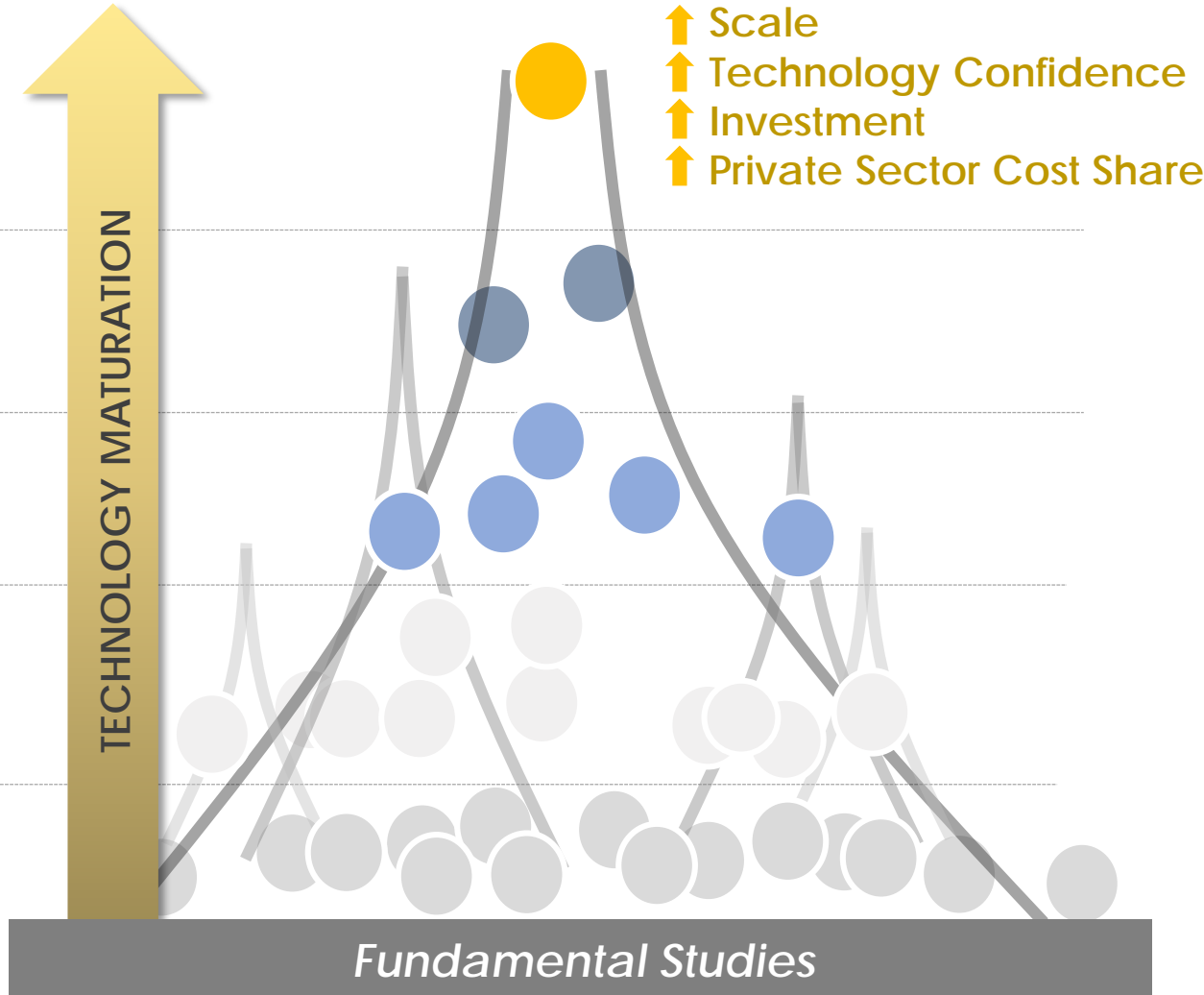
Technology component validated/integrated

TRL 4-5

DISCOVERY

Concept identified/proven at laboratory-scale

TRL 1-3



KNOWLEDGE-BASED DECISION MAKING

- **Systems Engineering and Integration**
 - Engineering analysis
 - Pre-FEED/FEED studies
 - NEPA
- **Decision Science and Analysis**
 - Screening studies
 - Techno-economic analysis
 - Technology Readiness Assessments

Established & Expanding Partnerships



An Active Portfolio from Concept to Market Readiness

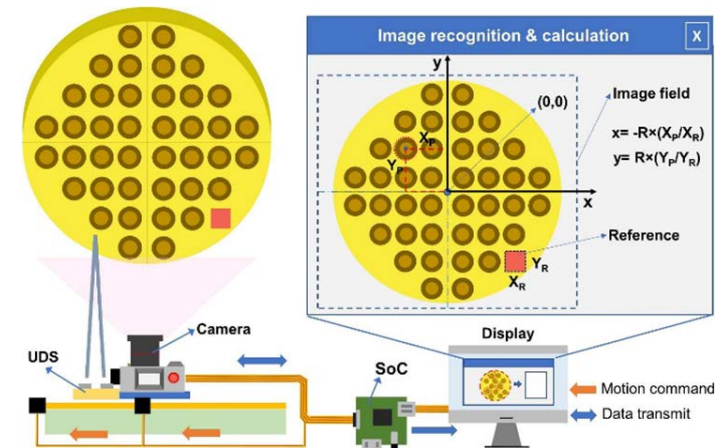
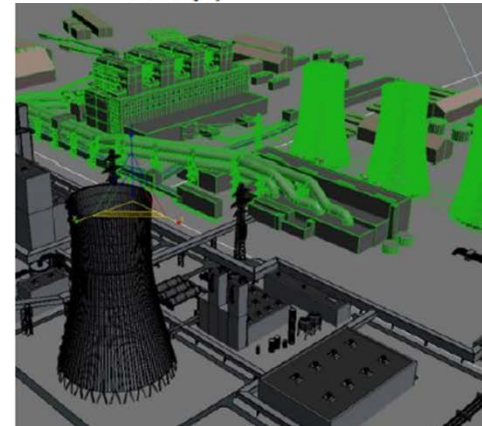
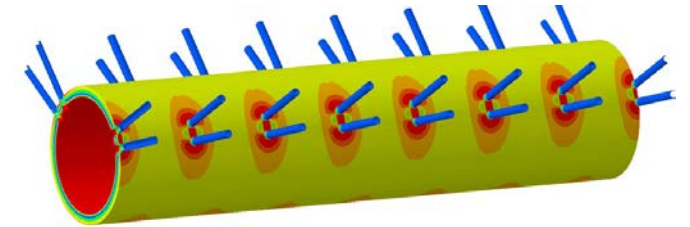
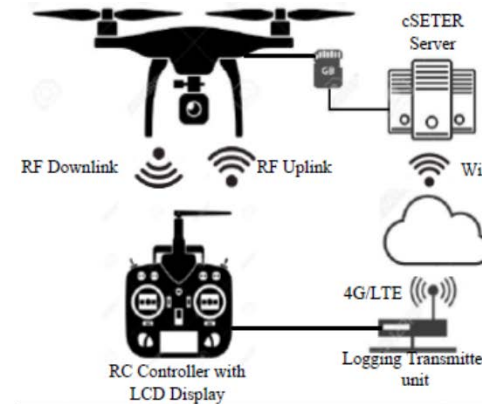
600+ partnerships with industry, academia & govt organizations

900+ research and development projects nationwide



Conclusions

- DOE's Office of Fossil Energy and the National Energy Technology Laboratory are **aligned with the priorities of the America First Energy Plan.**
 - R&D, STEM, and Workforce
- **NETL manages a variety of research programs** on behalf of DOE's Office of Fossil Energy
 - Including an HBCU-OMI program targeting fossil energy



Questions?

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