

U.S. Department of Energy Office of Fossil Energy

Ensuring America's Energy Security

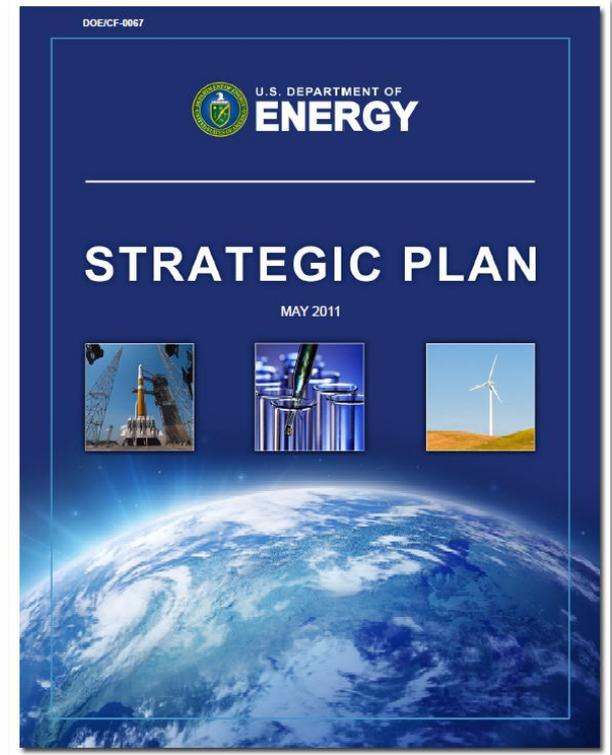
C.D. McConnell
Chief Operating Officer



FOSSIL.ENERGY.GOV

DOE Strategic Plan

- ▶ Transform our Energy Systems
- ▶ Science and Engineering Enterprise
- ▶ Secure our Nation
- ▶ Management and Operational Excellence



Fossil Energy Portfolio

- ▶ Petroleum Reserves
- ▶ Oil & Gas Technology R&D
- ▶ Clean Coal Technology R&D
- ▶ National Energy Technology Laboratory
- ▶ International Collaboration



Clean Coal - Major U.S. Demonstrations

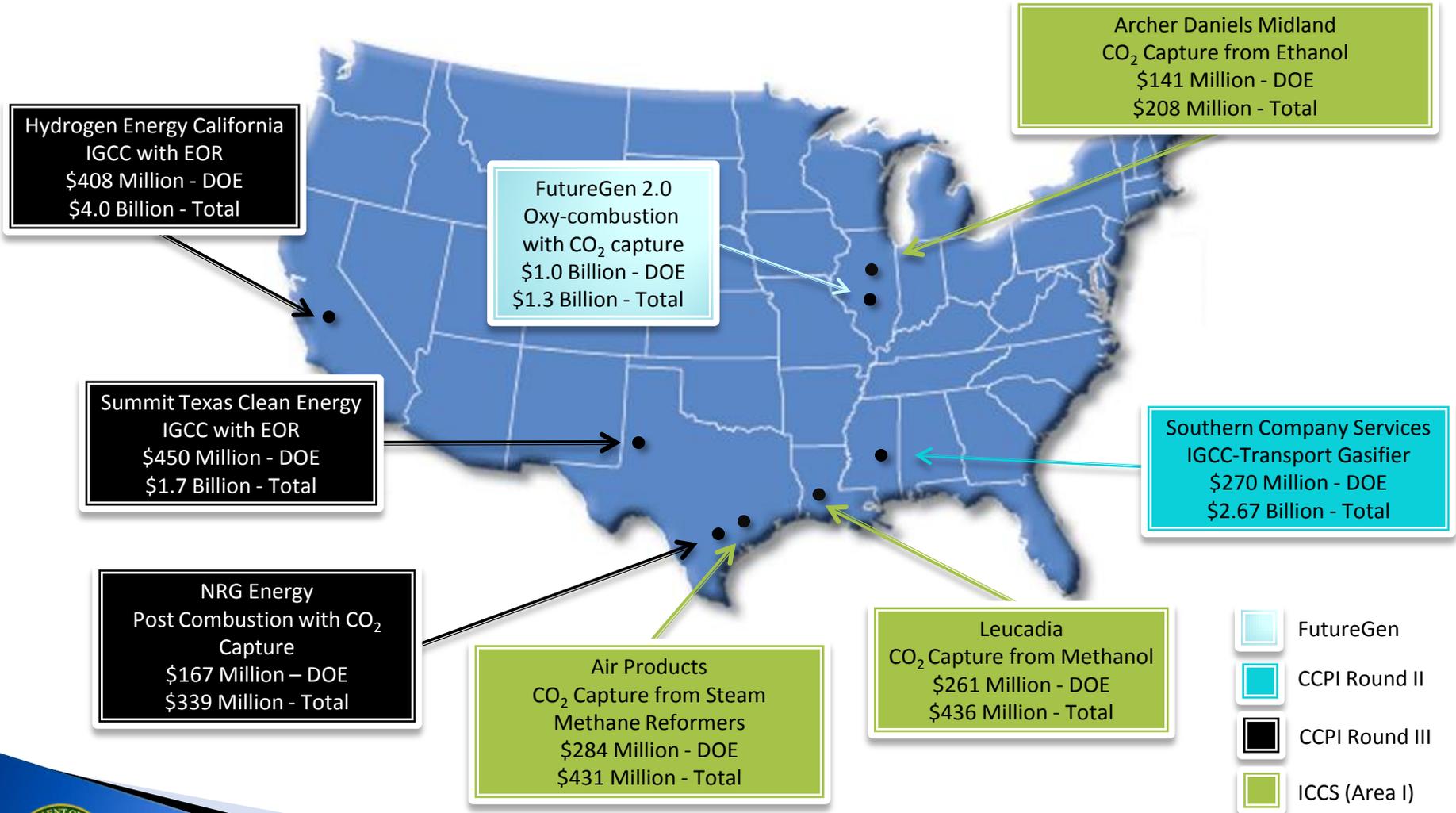


- Large-Scale Geologic CO₂ Storage
- CO₂ Capture from Industrial Facilities
- Post-Combustion Capture
- IGCC with Enhanced Oil Recovery
- IGCC with CO₂ Capture
- Oxy-combustion
- Monitoring, Verification, and Accounting (MVA)

Advanced Technology for Carbon Capture,
Utilization and Storage



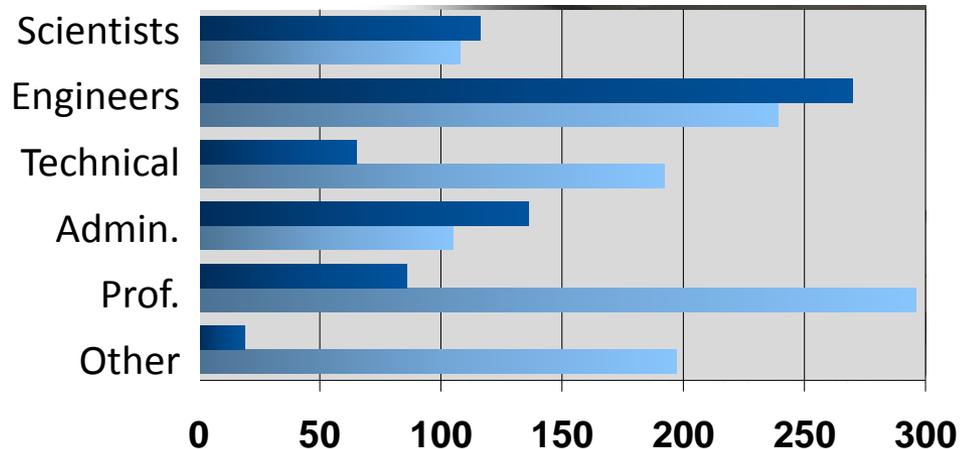
Clean Coal - Major U.S. Demonstrations



National Energy Technology Laboratory

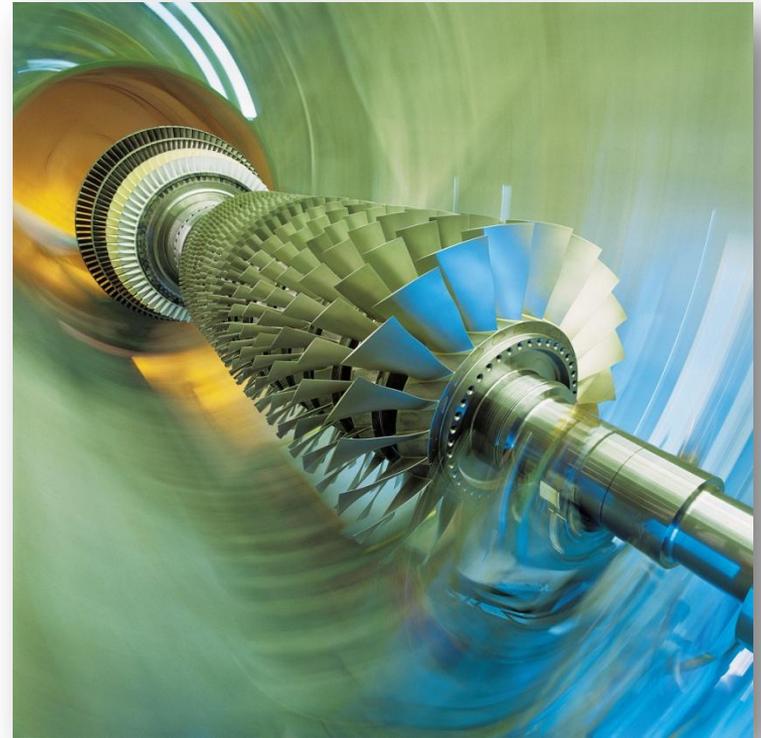


■ 692 Federal Employees
■ 1,137 Site-Support Contractors

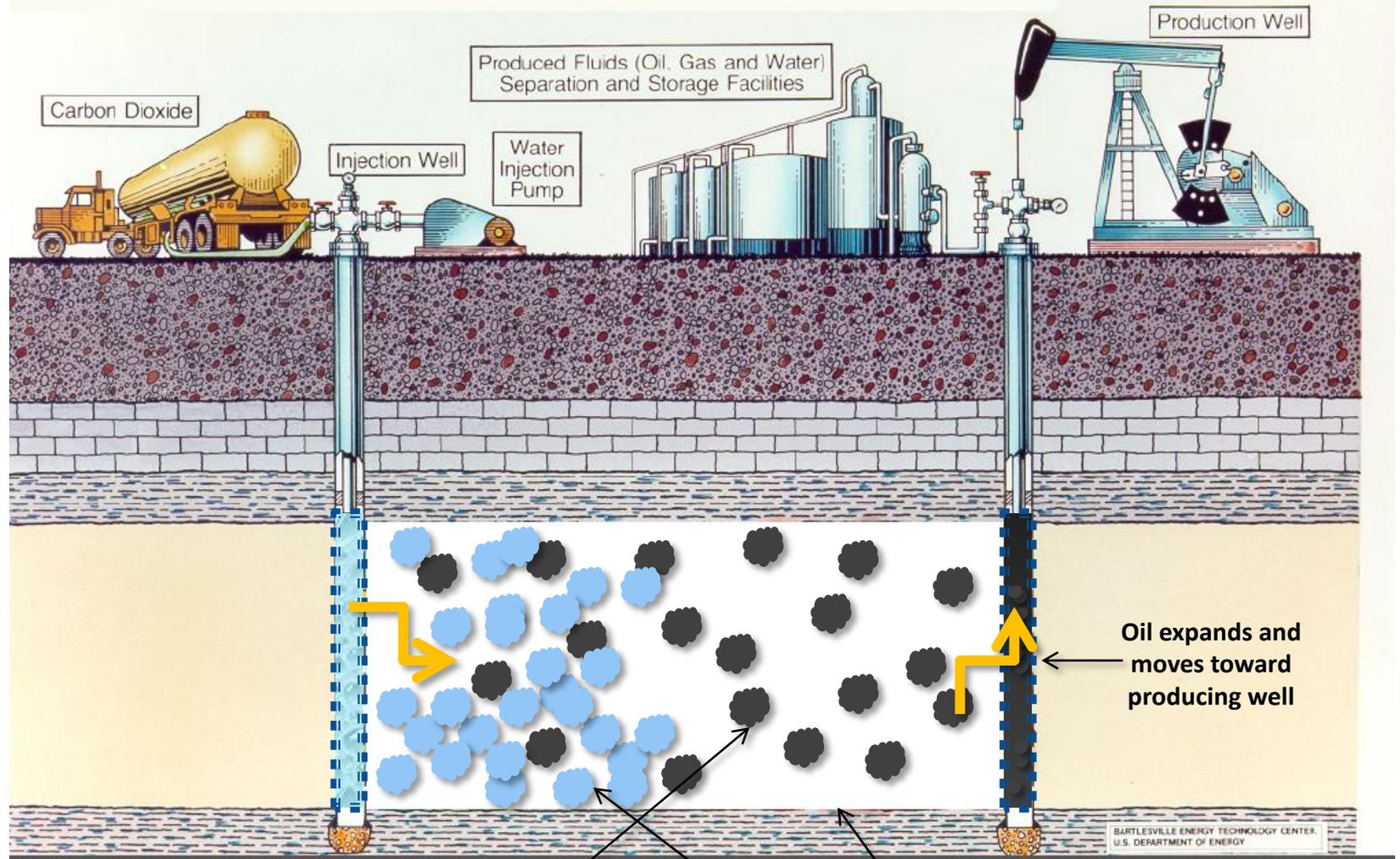


FE's Turbine Research Highlights

- ▶ Commitment to R&D
 - \$250M over past 5 years
- ▶ Research Focus
 - Hydrogen turbines
 - Fuel-flexible turbines
- ▶ University Turbine Research
 - 10 new projects announced



EOR – How It Works



Oil in reservoir

Injected CO₂ encounters oil
CO₂ remains in reservoir

Oil expands and moves toward producing well

BARTLESVILLE ENERGY TECHNOLOGY CENTER,
U.S. DEPARTMENT OF ENERGY

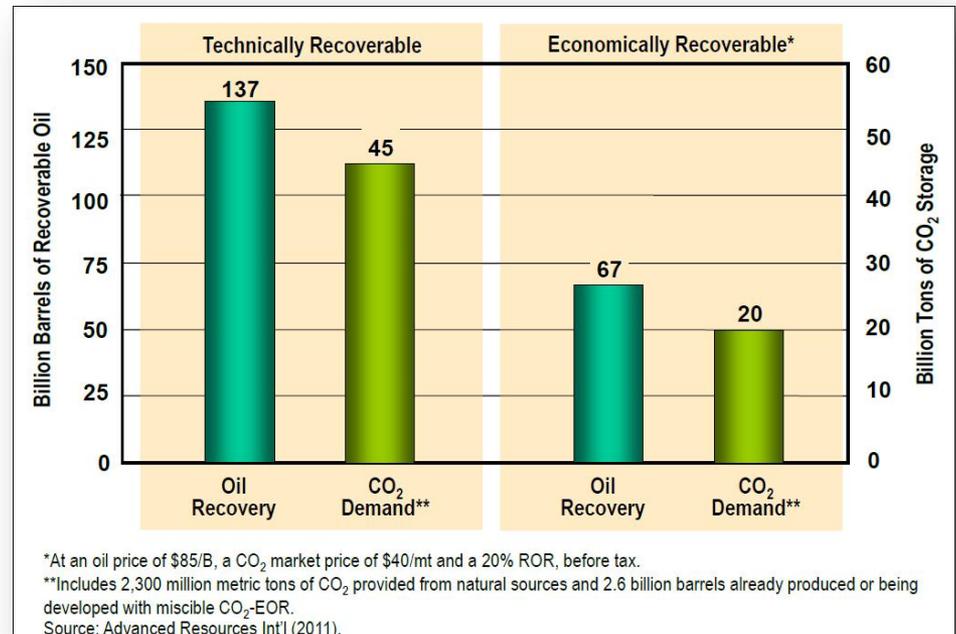


CO₂-Enhanced Oil Recovery

- ▶ The “Un-Mined Gold” Story for Energy and Jobs
- ▶ Benefits¹ of CO₂-EOR:
 - \$10 trillion in economic activity over 30 years;
 - 2.5 million jobs
 - 30 – 40 percent reduction in imported oil

¹ Source: U.S. Carbon Sequestration Council

Domestic Oil Supplies and CO₂ Demand (Storage) Volumes from “Next Generation” CO₂-EOR Technology**



Moving Forward...

- ▶ Competition for Global Resources
- ▶ Global Environmental Trends and Policies
- ▶ Technology Demonstrations
- ▶ Commercial Scale





Innovative Technology

Jobs

Government Revenues

GDP Growth

Environmental Sustainability

**Create a Compelling Choice for Fossil Energy that is
Game-Changing and Sustainable**

