

Advancing Fossil Energy Technology Solutions at the National Carbon Capture Center



National Carbon Capture Center

- **Location:** Wilsonville, Alabama
- **Sponsors:** U.S. Department of Energy and its National Energy Technology Laboratory
- **Partners:** Electric Power Research Institute, power and coal industry leaders
- **Managed by:** Southern Company



Major Accomplishments of the NCCC

- **100,000+ test hours** for post- and pre-combustion CO₂ capture and gasification projects
- Technology developers from U.S. and **six countries**
- PC4 operation for about **50,000 hours** and over **6,000 hours** under natural gas conditions
- **30+ projects** completed at PC4 – enzymes, membranes, sorbents, solvents and associated systems
- Supported commercial developers to scale-up and DOE's Carbon Capture Simulation Initiative



Post Combustion
Carbon Capture Center (PC4)

Key Findings of USEA Report

NCCC Supports These Key Findings

- Reduce cost of CCS to reduce financial barriers to pilot projects
- A portfolio of innovative policies will be necessary to advance CCS projects
- A genuine commitment by governments is needed to accelerate the development of CCS-based technologies



Reduce Cost and Financial Barriers to Pilot Projects

- Increased bench-scale R&D
- Pursuit of modular technologies
- Reusable large pilot-scale test platforms



Portfolio of Policies Needed to Advance CCS Projects

NCCC Teaming with ClearPath

- The ClearPath Foundation is a nonprofit policy group that supports maximizing existing resources and accelerating research in next-generation energy technologies.
- NCCC provides technical information for ClearPath's initiatives to promote clean, safe, reliable, affordable energy.
- As a sponsor of the NCCC, ClearPath has agreed to fund a portion of industry cost share.



ClearPath joins NCCC
as a sponsor

CLEARPATH

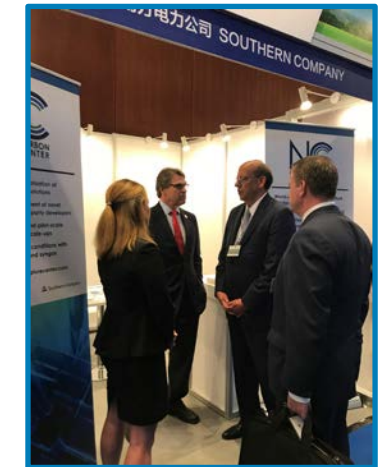
Genuine Commitment by Governments to Support CCS

Extensive International Collaboration

- Broad efforts in China, India, Middle East, Korea, Japan, EU, Australia, Canada and Norway
- Multiple paths for involvement: partners, developers, network members and workshops
- Co-founded and chair the International Test Center Network – 13 members



**Abdul Kalam – late
President of India**



**Meeting with Secretary
of Energy Rick Perry at
CEM in Beijing**



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