Carbon Sequestration Project Portfolio

2006

Introduction and Program Contacts

Technical Contacts

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National Map of R&D Projects

2006 Technology Roadmap and Program Plan

Carbon Sequestration Overview
- Carbon Sequestration Program Structure
- State Projects Summary Table
- Articles on the Program's Activities
  - *Environmental Progress*
  - *Energy Conversion and Management*
  - *Environment International*
- Budget
- State Budget Analysis Map
- Systems Analysis / Technology Fact Sheets
  - CO_2 Capture Technologies Installed on PC Plants
  - CO_2 Capture Technologies Installed on IGCC Plants
  - Coal Technologies Offer CO_2 Capture Benefits
  - Carbon Sequestration for Existing Power Plants
  - Coal-Based IGCC Offers CO_2 Capture Benefits for Oil Recovery
- Program Fact Sheets
  - Sequestration in Geologic Formations
  - Geosequestration Field Experiments
  - Sequestration through EOR
  - Field Tests Demonstrate Secure Storage
  - Terrestrial Sequestration
  - Sequestration in the Ocean
  - Cost of CO_2 Capture and Storage
  - Lake Nyos and Mammoth Mountain
  - Risk Assessment for Long-Term Storage
- R&D Fact Sheets
  - Carbon Sequestration Science
  - Sorbent and Catalyst Preparation Facilities
  - Instrumentation & Facilities for In-situ Reaction Studies
  - Air Pollution Research Facilities

Regional Partnerships
- Introduction
- Regional Partnerships Map
- Project Fact Sheets - Validation Phase
  - Midwest Regional Partnership (MRCSP)
  - Midwest Consortium (MGSC)
  - Southeast Partnership (SECARB)
  - Southwest Partnership
  - West Coast Partnership (WESTCARB)
  - Big Sky Partnership
  - Plains CO_2 Reduction Partnership (PCOR)

Non-CO_2 GHG Mitigation
- National Map of Non-CO_2 GHG Projects
- Non-CO_2 GHG Projects by District
- Non-CO_2 GHG Roadmap
- Project Fact Sheets
  - Coal Mine Ventilation Air Methane, CONSOL
  - Ultra-Fast TSA, Velocys
  - Landfill Gas Sequestration, KGS
  - Intelligent Bioreactor Management System (IBM-IS), Univ. of Delaware

Breakthrough Concepts
- National Map of Breakthrough Projects
- Breakthrough Projects by District
- Breakthrough Concepts Roadmap
- Project Fact Sheets
  - H_2 Silica Membranes, Univ. of Minnesota
  - Membranes for Controlling CO_2, Univ. of NM
  - Microporous Metal Organic Frameworks, UOP
  - Ionic Liquids, Notre Dame
  - Neutralizing Carbonic Acid, Harvard Univ.
  - Mineral Carbonation, Arizona State Univ.
  - Mineral Dissolution Kinetics, Indiana Univ.
  - Biocatalysis of Value-Added Chemicals, Univ. of Georgia
  - Solvents for CO_2 Capture, NETL
  - Novel Membranes for CO_2 Removal, NETL
  - Molecular Design & Evaluation of CO_2 Adsorbents, NETL
  - Bauxite Residue/Brine, NETL

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CO_2 Capture

- National Map of Capture Projects
- CO_2 Capture Projects by District
- CO_2 Capture Roadmap
- Project Fact Sheets
  - Advanced Oxyfuel Boilers, Praxair
  - CO_2 Hydrate Process, Nexant
  - Dry Regenerable Solvents, RTI
  - Thermally Optimized Membranes, LANL & INEEL
  - Flue Gas Recirculation, ANL
  - O_2 Firing in Fluidized Beds, ALSTOM
  - Potassium Carbonate, UTexas at Austin
  - Integrated Modeling Framework, CMU
  - Conceptual O_2-Based PC Boiler, Foster Wheeler
  - Conceptual Optimized Fossil Energy Systems, UC Davis
  - Direct Fuel Cell, FuelCell Energy
  - O_2-Fired CO_2 Recycle, Southern Research Institute
  - Modular CO_2 Capture Facility, NETL
  - Solid Sorbents (Precombustion), NETL
  - Solid Sorbents (Postcombustion), NETL
  - Ammonia-Based Process, NETL
  - Solid Amine Sorbent, NETL

Sequestration

- National Map of Sequestration Projects
- Sequestration Projects by District
- Sequestration Roadmap
- Project Fact Sheets
  - *Geologic*
    - Optimal Geological Environments, UTexas
    - COAL-SEQ II Project, ARI
    - ECBM and Unmineable Coal Seams, CONSOL
    - Texas Low-Rank Coal, TX Eng. Exp. Stat.
    - Controlling Coal Permeability, ORNL
    - CO_2 Storage in Coal Seams, NETL
    - Geology & Reservoir Simulation, NETL
    - GEO-SEQ Project, LBNL, LLNL, ORNL
    - CO_2 Sequestration in Basalt Formations, PNNL
    - Ohio River Valley, Battelle
    - Geologic Sequestration Core Flow Lab, NETL
    - Gas/Water Interactions, NETL

Sequestration, Continued

  - *Terrestrial*
    - Reclamation of Mine Lands, SFA Univ.
    - Restoring Appalachian Mined Lands, Virginia Tech
    - Surface Mine Lands, Univ. of KY
    - Enhancing Sequestration Reclamation, ORNL, PNNL
  - *Ocean*
    - Feasibility of Ocean Sequestration, MBARI
    - International Collaboration, MIT
    - Limestone Sequestration in Ocean, UMass

Monitoring, Mitigation, and Verification (MM&V)

- National Map of MM&V Projects
- MM&V Projects by District
- MM&V Roadmap
- Project Fact Sheets
  - Weyburn CO_2 Sequestration Project, Natural Resources Canada
  - Tools for Carbon Sequestration, Nature Conservancy
  - Carbon Management GIS for the U.S., MIT
  - Non-Invasive Soil Carbon Scanning System, BNL
  - NATCARB, Univ. of Kansas
  - Sequestration in Ohio Reclaimed Mine Soils, OSU
  - Sequestration in a Depleted Oil Reservoir, SNL, LANL
  - Advanced Measurements for Terrestrial MM&V, LANL
  - Science-Based Permitting Guidance, UTexas
  - CO_2 and Methane Leakage Risk Assessment & Monitoring Tool Development, BP North America
  - Assessing C Pools in Reclaimed Mine Soils, OSU
  - Instrument for Monitoring Atm. CO_2, CalTech
  - Low-Cost Elevation Models, Winrock International
  - Geologic Storage Integrity, NETL
  - Degradation of Wellbore Cement, NETL
  - CT Scanning for Petrophysical Applications, NETL