

Regional Carbon Sequestration Partnerships Phase III



WESTCARB Annual Meeting

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Regional Carbon Sequestration Partnerships “Developing the Infrastructure for Wide Scale Deployment”

Characterization Phase

- 24 months (2003-2005)
- 7 Partnerships (40 states)
- \$16M DOE funds

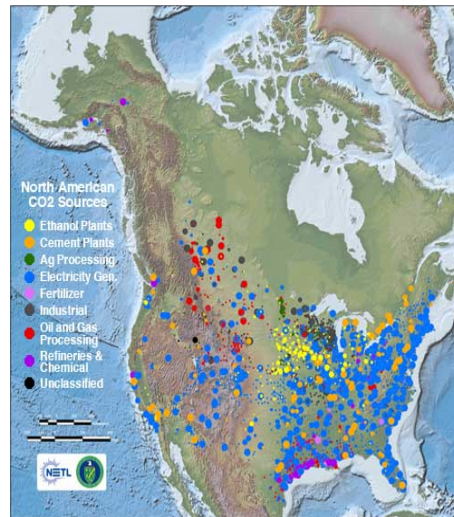
Validation Phase

- 4 years (2005 - 2009)
- **Field validation tests**
 - 25 Geologic
 - 10 Terrestrial

- \$100M DOE funds

Deployment Phase

- 10 years (2007-2016)
- Several large volume injection tests
- \$450M DOE funds



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Deployment Phase *The Basics*

- **Continuation of existing award – new budget and tasks for Deployment Phase**
- **7 large volume tests**
 - One in each Partnership region
 - Large volume – 100K to 1M tons CO₂ injected
- **National Lab funding is limited to 25%**
- **Requirement of 20% cost share**
- **Active communication during negotiation process**
- **External and internal review panels**
- **Divided into 3 Budget Periods**



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Deployment Phase *Activities*

- | | | |
|-------------------------------|---|--|
| Years 1-3
Budget Period 1 | { | Site selection and characterization
Permitting and NEPA compliance
Well completion and testing
Infrastructure development |
| Years 4-7
Budget Period 2 | { | CO ₂ procurement and transportation
Injection operations
Monitoring activities |
| Years 8-10
Budget Period 3 | { | Site closure
Post injection monitoring
Project assessment |



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DOE Funding Planned *Deployment Phase*

Fiscal Year	DOE Budget Requirements (\$M)	DOE Funding Per Partnership (\$M)
2008	\$ 28	\$ 4*
2009	\$ 35	\$ 5*
2010	\$ 56	\$ 8
2011	\$ 56	\$ 8
2012	\$ 56	\$ 8
2013	\$ 56	\$ 8
2014	\$ 56	\$ 8
2015	\$ 56	\$ 8
2016	\$ 35	\$ 5
2017	\$ 35	\$ 5
TOTAL	\$ 469 (\$118**)	\$ 67 (\$16.85**)



*Includes cost to prepare NEPA documentation
**20% cost share required in addition to DOE funding

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Estimated Procurement Schedule *Deployment Phase*

- DNFA Approved 9/22/2006
- Congressional Notification: 10/25/2006
- Request for Proposal Issuance: 12/15/2006
- Proposals Received: 04/02/2007
- Technical Evaluation: 04/02/2007 - 05/15/2007
- Pre-negotiation briefings: 05/22/2007 - 06/07/2007
- Negotiation Strategy Reports: 06/07/2007 - 06/15/2007
- PR's issued for modifications 06/15/2007
- Techline Issued: 06/15/2007
- Award(s): 9/30/2007 - 12/31/2007



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Deployment Phase

Sources and Sinks

- **Sources**
 - Natural vents
 - High purity industrial vents
 - CO₂ captured from PC plant (advanced capture system)
- **Transportation**
 - Pipeline
 - Truck and Rail (cost prohibitive)
- **Sinks**
 - Saline formations representative of region
 - Value added must maximize storage of CO₂
 - Competent seals are a must
 - Structure must be conducive to trapping
 - Capacity and availability must be high

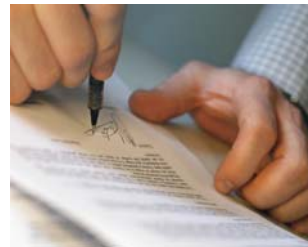


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Deployment Phase

Outcomes

- **Site selection requirements**
- **Storage capacity assessment**
- **Design criteria**
 - Injection wells
 - Regional MMV program
 - Site Closure
- **Permitting requirements**
- **Validate reservoir and risk assessment models**
- **Best practices manuals**



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Questions ?



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