#### Texas and CCS Amy Hardberger ahardberger@edf.org



# Why Texas? Why not?

Financial:

•Over 480 million tons of carbon dioxide has been captured, transported, injected, and stored in connection with the enhanced recovery of oil (EOR) in Texas.

•EOR is currently responsible for over 15% of current production in Texas.

• 3-5 billion barrels of additional Texas oil is available across the state to be recovered using CO2 for EOR.

Regulatory

• Federal Climate Legislation



## **Texas CCS Policy**

### 2007

- HB 3732 (Rep. Hardcastle)
  - Reduces severance tax for anthropogenic CO2 used in EOR
  - Requires that operator show by substantial evidence or reasonable expectation that 99% of the CO2 will remain sequestered for 1000 years
    - Existing EOR project can provide additional verification to receive tax credit



#### 2009

- HB 469 (Rep. King, Sen. Seliger)
  - Goal creation of state incentives for anthropogenic CCS projects
  - Directs comptroller to issue franchise tax credits of the lesser of10% of total capital costs or \$100 million/project
  - First 3 projects after 9-1-2013
  - Credits issued once operational
  - Modifies definition of "advance clean energy project (new and existing facilities) to capture and sequester at least 50% CO2
  - Establishes new sales tax exemption for tangible personal property used in connection with sequestration IF installed to capture, transport or inject CO2
  - Extends reduced severance tax for CO2 used in EOR from 7 to 30 years.



#### HB 1796 (Rep. Chisum, Sen. Watson)

- Required Land Commissioner to contract with UTBEG to conduct a study of state-owned offshore land to ID potential CO2 repository sites.
- TCEQ must develop standards and rules for offshore seq. that comply with USEPA
- School Land Board (SLB) will make final determination of suitable storage locations
- At closure, SLB gains title to properties, but producer retains liability for acts or omissions in construction or operation of CO2 repository
- New Technology Implementation Grant Program
  - Administered by TCEQ
  - Implement new technologies to reduce emission from facilities and other stationary sources.
  - Must capture at least 50% CO2 emissions
  - At least 50% cost match by applicant



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### SB 1387 (Sen Seliger, Rep. Crownover)

- Clarifies roles of the Texas Railroad Commission (TRRC) and Texas Commission on Environmental Quality (TCEQ)
- TRRC authority to regulate sequestration in oil and gas fields and bring formation directly above or below oil and gas fields and directs TRRC to develop rules
- Authorizes a study to advise the Legislature on who should regulate other CO2 storage activities and how they can coordinate



- TCEQ must certify that underground fresh water supplies will not be injured by the permitted activity before a permit is issued
- Texas General Land Office (GLO) in conjunction with the TCEQ, the RCT, and the BEG to develop recommendations for managing geologic storage of CO2 on state-owned lands
- Creation of stewardship trust fund to pay for limited longterm issues such as infrastructure and maintenance



# **Participants**

- Policy Makers
- Regulatory Agencies
- Industry
- National Groups
  IOGCC, GWPC
- NGOs





### Other States

| State         | Legislation | Legislation | Regulatory | Other    |
|---------------|-------------|-------------|------------|----------|
|               | Pending     | Passed      | Activity   | Activity |
| Alaska        |             |             |            | X        |
| Arkansas      |             |             |            | Х        |
| California    |             | Х           | Х          |          |
| Colorado      |             | Х           |            |          |
| Connecticut   |             | X           |            |          |
| Idaho         |             | Х           |            |          |
| Illinois      |             | Х           |            |          |
| Indiana       | Х           |             |            |          |
| Kansas        | Х           | Х           | Х          |          |
| Kentucky      | Х           | Х           |            |          |
| Louisiana     |             | Х           |            |          |
| Michigan      | Х           |             |            |          |
| Minnesota     |             |             |            | Х        |
| Mississippi   |             | Х           |            |          |
| Missouri      |             | Х           |            |          |
| Montana       |             | Х           | X          | X        |
| New Mexico    |             |             |            | X        |
| New York      | X           |             |            |          |
| North Dakota  |             | X           | X          |          |
| Ohio          |             |             |            | X        |
| Oklahoma      | X           | X           | Х          |          |
| Oregon        | X           |             |            |          |
| Pennsylvania  | X           | Х           | Х          |          |
| South Dakota  |             | Х           |            |          |
| Texas         | X           | X           | X          |          |
| Utah          | X           | Х           | Х          |          |
| Washington    |             | Х           | X          |          |
| West Virginia | X           | Х           | X          |          |
| Wisconsin     |             | Х           |            |          |
| Wyoming       |             | Х           |            |          |

### **Lessons to Learn**

- Incentivize
- Protect
- Regulate

#### Lesson 2

#### Lesson 1

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