Key Questions for CCS

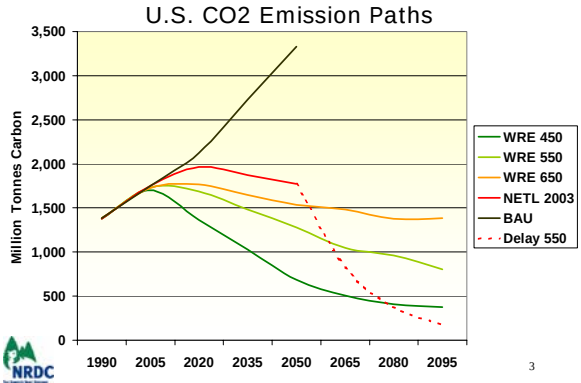
David G. Hawkins, NRDC
May 4, 2004

CCS -- Boon or Bane?

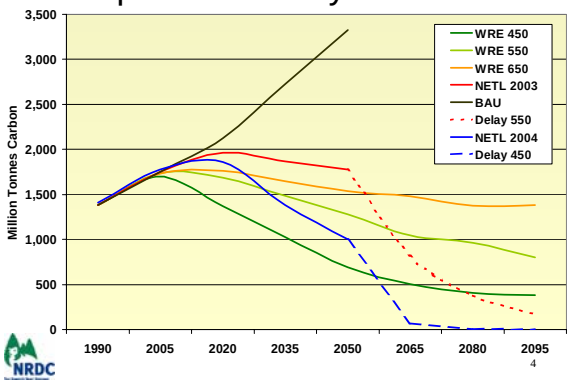
- Will CCS Speed Mitigation Action or Delay it?
- Will CCS Complement Efficiency & Renewables or Displace Them?
- Will CCS be Safe and Permanent or Temporary and Risky?

Speed or Delay?

U.S. CO2 Emission Paths



Speed or Delay--Take 2



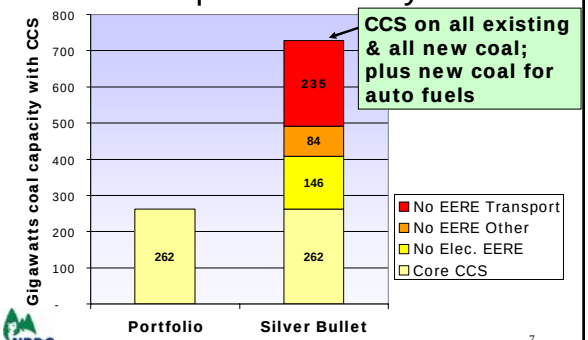
Complement EERE or Displace Them?

Sources of Reductions in NETL Pathway (MMTCE)

• Electric CCS	500
• Other CCS	120
• Electric EERE	280
• Other (stationary) EERE	160
• Transportation EE	450
• Non-CO2 GHG	480

Source: Kuuskraa & Dipietro, Nov. 2003.

Impact of No EERE Progress on CCS Requirements by 2050



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Permanent & Safe or Temporary and Risky?

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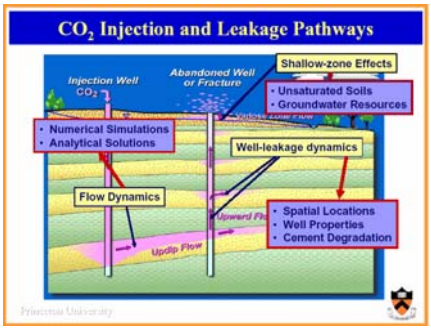
Failure Assessment



Source: Celia and Scherer, 2004

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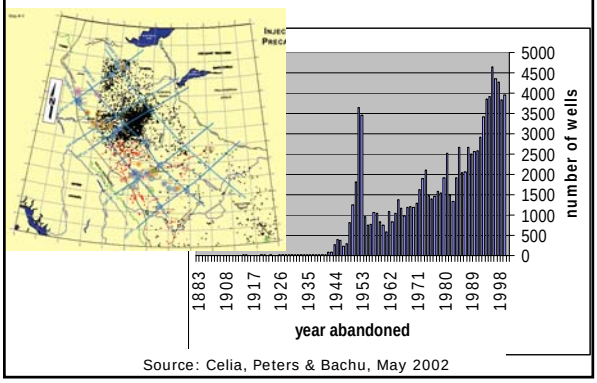
Leakage Pathways: Abandoned Wells in the Alberta Basin



Source: Celia, Peters & Bachu, May 2002

Assuring Performance

- Who is the Regulator?
- Performance standards; design practices; combination?
- Public involvement.
- Process for answering these questions: US EIS; CSLF; other?

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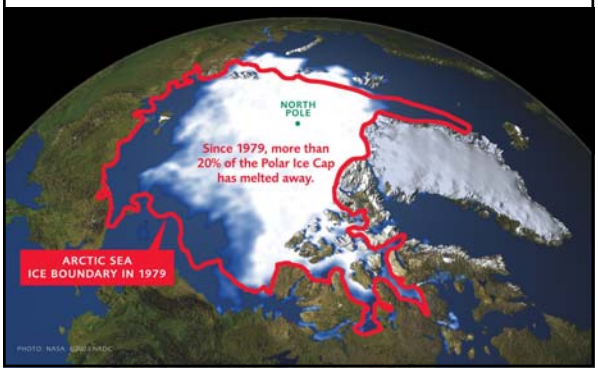
What's Wrong With This Picture?