



Financial Mechanisms to Support Long-Term Liability for CCS: A U.S. Perspective

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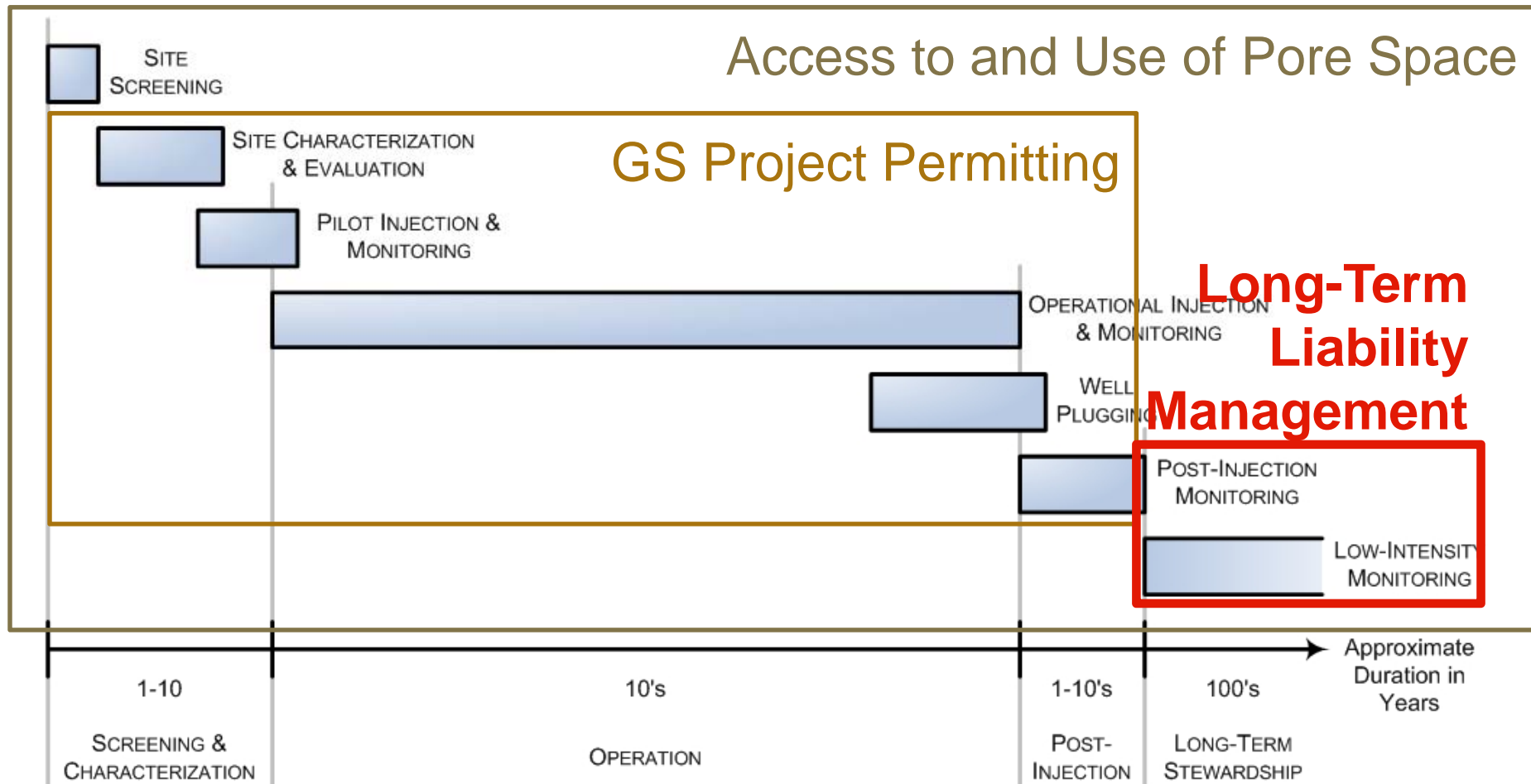
CCS Regulatory Project

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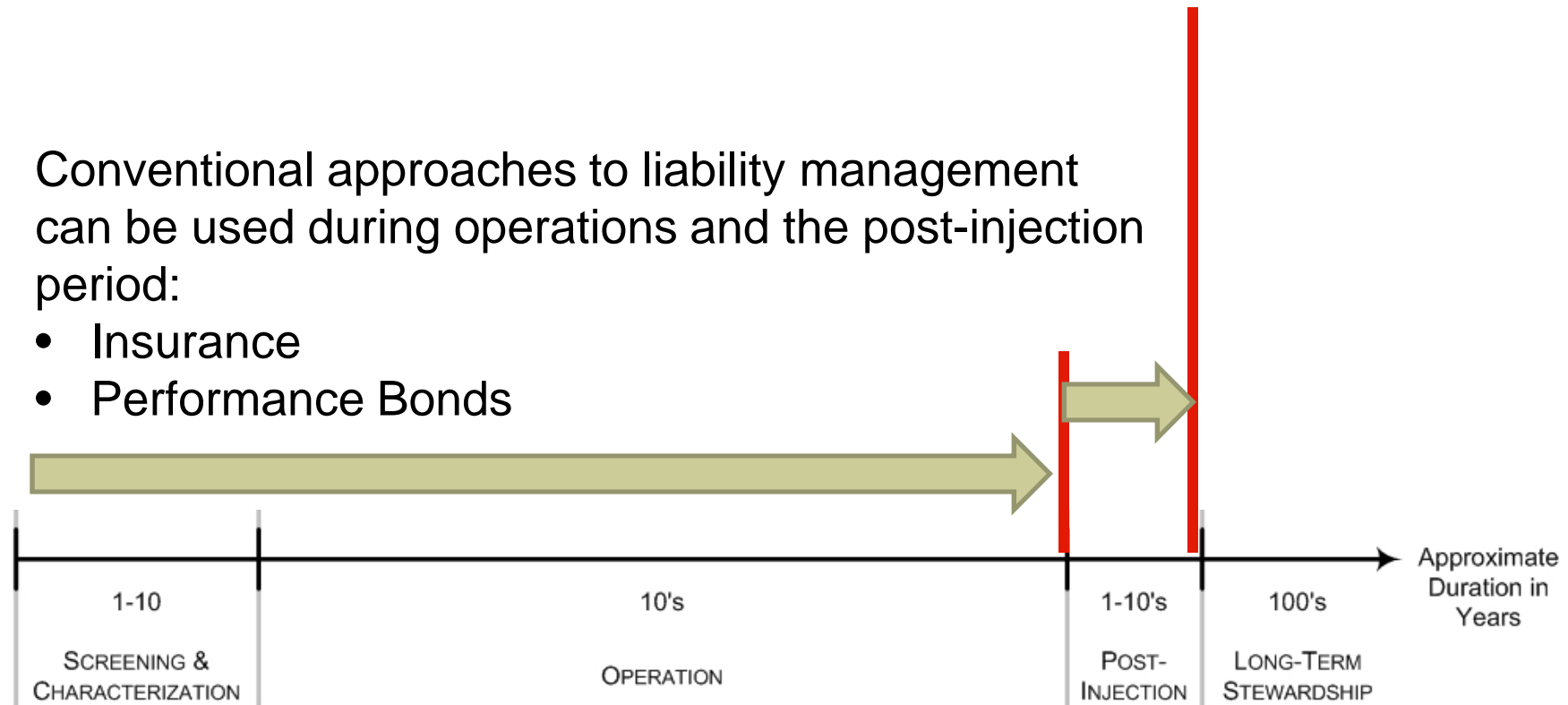
Long-term liability management is one of three key regulatory issues for CCS



Liability management strategies depend on the project phase

Conventional approaches to liability management can be used during operations and the post-injection period:

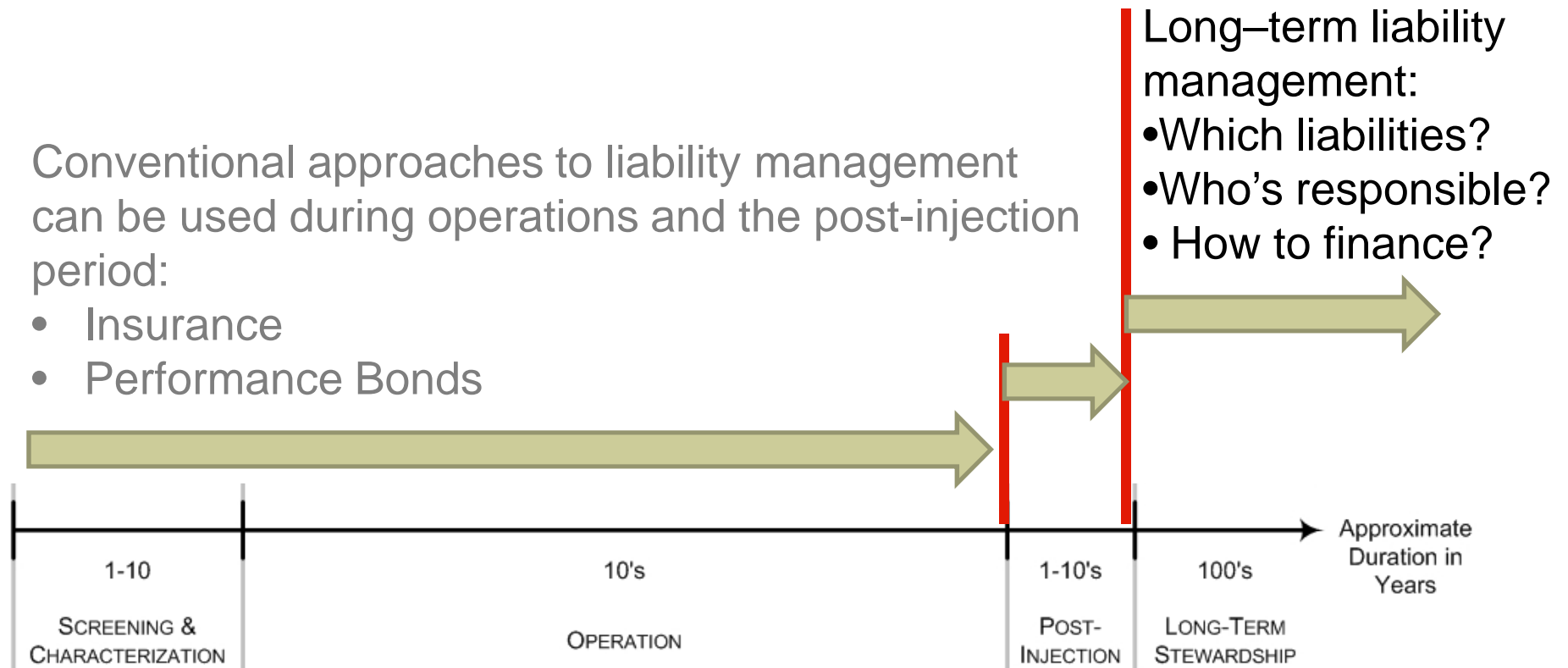
- Insurance
- Performance Bonds



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- Insurance
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Long-term liability comes in three different flavors

Type of Liability	Definition	Examples
Regulatory	Obligation to pay for post-closure activities required by regulation	<ul style="list-style-type: none">• Monitoring, verification, accounting and reporting• Remediation if needed
Tort	Obligation to pay compensatory damages arising from harm or injury during long-term stewardship	<ul style="list-style-type: none">• Impacts to USDW• Damage to mineral resources
Climate	Obligation to retire allowances or to take other actions to compensate for leakage under a greenhouse gas emission reduction program.	<ul style="list-style-type: none">• Leakage of CO₂ to the atmosphere

Who will administer long term stewardship?

Federal Government



- Pros
 - Larger risk pool
 - Can provide backstop
- Cons
 - Potential for Congress to raid the fund

State Government

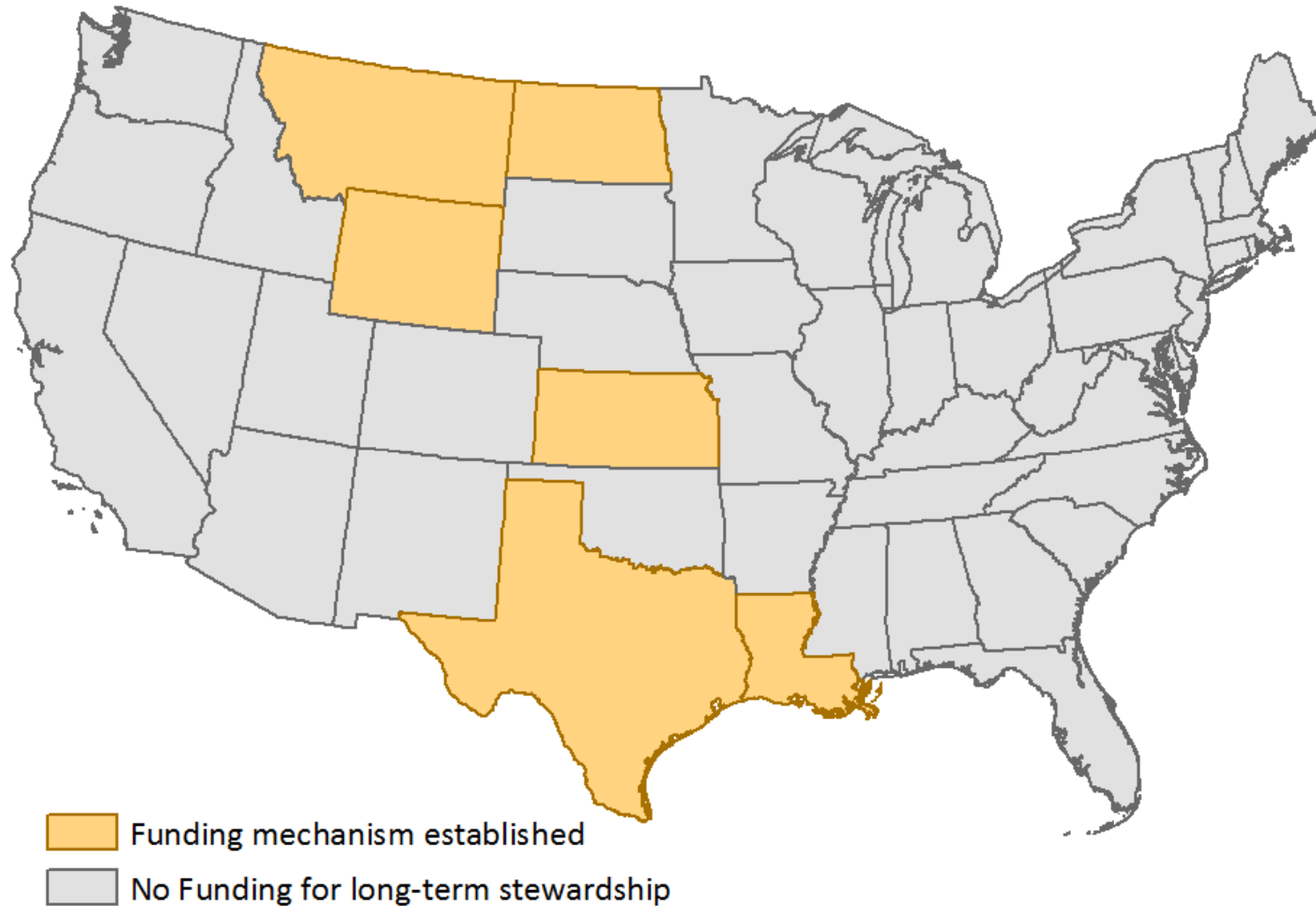


- Pros
 - Politically palatable
- Cons
 - Inconsistency
 - Sites spanning states
 - Incomplete liability coverage

No federal legislation on long-term liability has been enacted

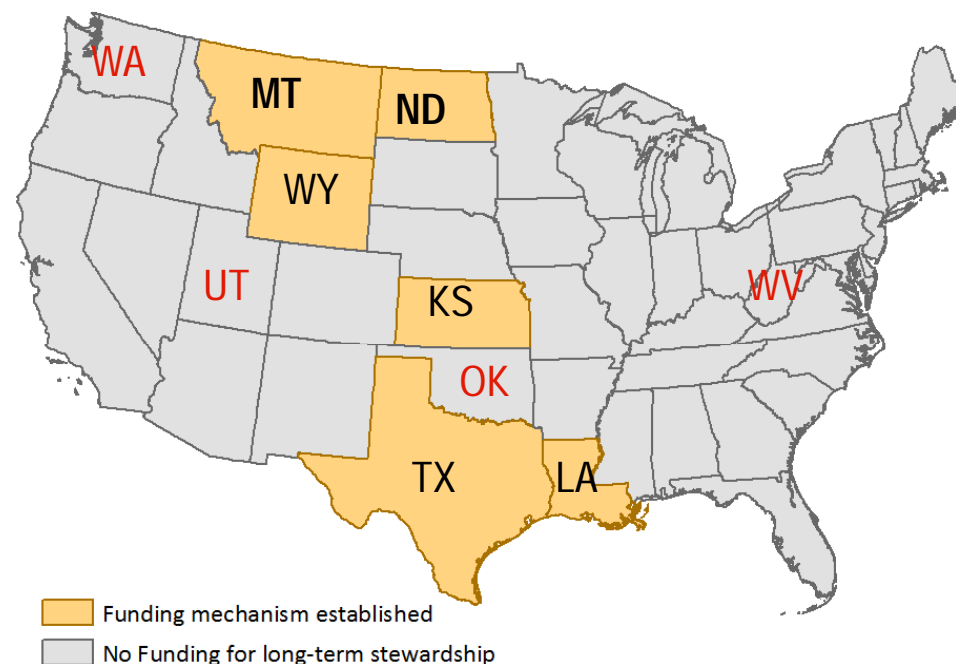
Proposed Bills	Status	Long-term Liability Provisions
H. 2454 American Clean Energy and Security Act	Passed House July 2009	Establishes task force to provide recommendations to Congress on financial mechanisms for long-term liability
S. 1733 American Clean Energy Security Act	Introduced Senate February 2010	Same as above

Six states have addressed long-term liability



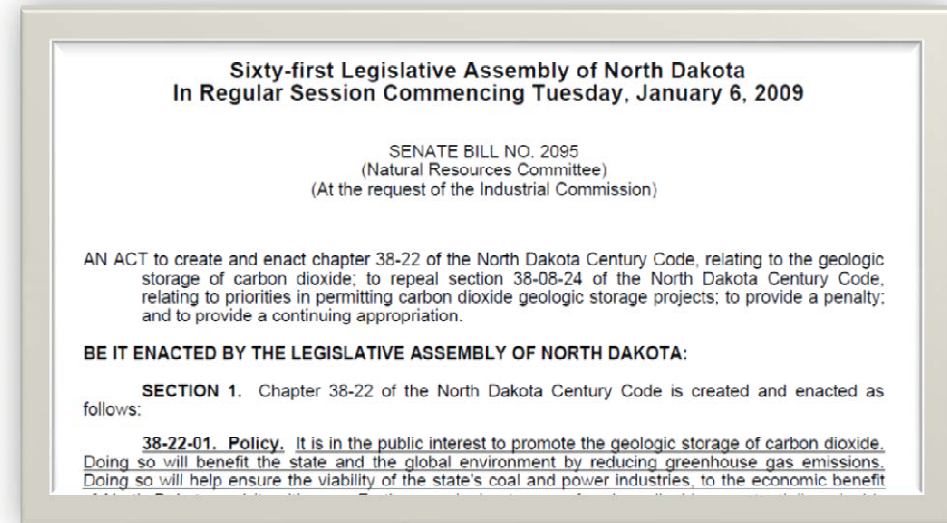
Three different approaches to financing long-term stewardship

1. No funding mechanism
(**OK, UT, WA, WV**)
2. Long-term stewardship fund established, state assumes limited long-term liabilities
(**KS, LA, TX, WY**)
3. Long-term stewardship fund established, state assumes all long-term liabilities (**ND, MT**)



General structure of state long-term liability legislation

1. Creates a long-term stewardship fund and requires operator to pay into the fund during operations
 - Amount varies by state
2. Post-closure period to verify site stability
 - Minimum length varies by state
3. State grants certificate of closure
 - Requirements vary by state, as does the extent to which operators are released from liability
4. State assumes long-term responsibility for the closed site
 - Which liabilities the state assumes varies



Statutory language defines:

- States' long-term responsibilities
- Operator's long-term responsibilities
- Authorized uses for the fund.

Financing for long-term stewardship funds

State	Application Fee	Annual Fee	Per ton Fee
Kansas	\$4,500 + \$100/well	\$1,000/well	\$0.05
North Dakota	\$150 + actual processing costs		\$0.07
Texas	\$75,000	\$50,000 for each year post-injection and pre-closure	\$0.10
Louisiana	Fee per ton to be determined by rule (\$5M cap per site)		
Montana	Fee per ton to be determined by rule		
Wyoming	Fee per ton to be determined by rule		

Statutory language on long-term liabilities

State	State takes over....	Operator released from....
Montana SB 498 (2009)	All rights and interests in and all responsibilities associated with the geologic storage reservoir and the stored carbon dioxide	All regulatory requirements and liability associated with the geologic storage reservoir and the stored carbon dioxide
Louisiana HB 661 (2009)	Long-term monitoring of the site, including remediation of any well leakage. State assumes no liability.	All (regulatory) duties and all liability associated with or related to that storage facility which arises after the issuance of the certificate of completion.
Kansas HB 2419 (2007)	Any future remediation or monitoring activities. State assumes no liability	Nothing.
Wyoming HB 17 (2010)	Long-term measurement, monitoring and verification of geologic sequestration sites	Nothing.

Approved uses for state long-term GS funds

State	Long-term Site Management			Tort Liability	Climate Liability
	Monitor	Remediate: Limited*	Remediate: Full		
Montana SB 498 (2009)	✓		✓	✓	✓
North Dakota SB 2095 (2009)	✓		✓	✓	✓
Kansas HB 2419 (2007)	✓		✓		
Louisiana HB 661 (2009)	✓	✓			
Texas - SB 1387 (2009)	✓	✓			
Wyoming HB 17 (2010)	✓				

* State's responsibility for remediation limited to fixing mechanical leaks

Long-term liability management in the US: Current Status

- No federal authority to establish funding or accept responsibility for long-term stewardship. New legislation would be required.
- Some states are establishing financial mechanisms and accepting responsibility for long-term stewardship. Approaches vary: in some states responsibility is unclear and certain liabilities remain uncovered.

CCSReg Project recommendations: Liability management

Commercial projects: Operating phase, including the post injection period

Rely on the private insurance market, mutual insurance, and bonding for risk management. Government backstop.

Commercial projects: post-closure

Covered by a long-term stewardship program that channels liability and responsibility for compensation to a new federal agency, financed from a revolving fund

"First-mover" projects

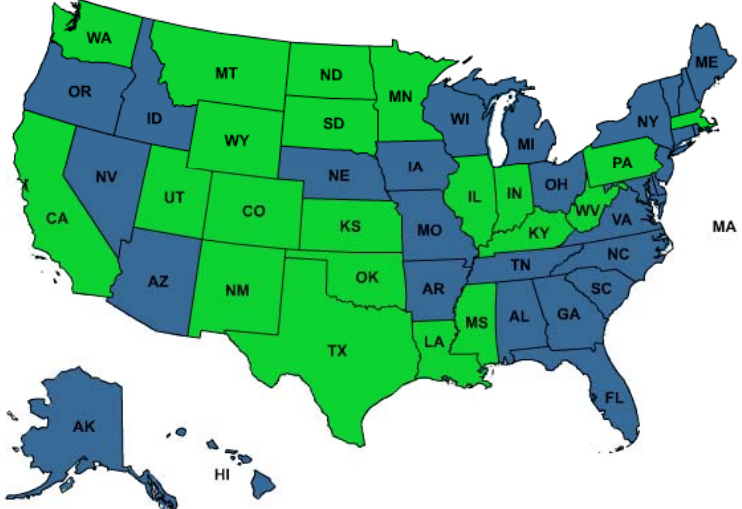
A stop-gap federal indemnity program should be authorized for the post-closure phase, with the aim of having these projects eventually covered by the stewardship program for commercial projects

Searchable database of state CCS policies at www.CCSReg.org

Project Team Why CCS? Approach Publications Resources State Policy Home

State CCS Policy

Click on a state to see details of enacted legislation on CCS



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For Questions, comments, and inquiries, please contact the State Policy on CCS Database by e-mail at spoccs@umn.edu

Please let us know about CCS policy developments in your state!

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CCS Policy Brief Series

The CCSReg project has released six briefs that address legal and regulatory barriers to CCS:

- Comprehensive regulation of GS
- Access to and use of pore space
- Long-term liability
- Pipeline transport
- Learning and adaptation in regulation of GS
- Accounting for CO₂ in CCS



www.CCSReg.org

Thank you

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