LIABILITY (RISK) MANAGEMENT: Ensuring Financial Responsibility for GS

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Common Language? Are you Sure?

- **RISK** – Of what?
  - **Moral Hazard** – Will the party be better off in the event of loss / failure? Is the party indifferent, and therefore won’t try to prevent or mitigate certain losses?

- **FINANCIAL RESPONSIBILITY** – To whom, for what? When?

- **LIABILITY** – Statutory? Common law? Civil law jurisdiction?

- **HARM / INJURY** – BI or PD or other?

- **DAMAGES** – Nature? Type?

GS Project Life Cycle

Capture → Transport → Sequestration

Siting/Construction → Operation (CO₂ Injection) → Plugging, Abandonment, & Post-Closure → Long-Term Stewardship

- ~1 year
- 1 to 30 years
- Defined
- Indefinite

- Industry Sectors – Utility v. EOR/EGR
- Early movers (pilots) v. commercial-scale deployment
- Existing statutory implications – SDWA, CAA, RCRA, CERCLA
Risk Profile for GS Sites

- **Shape of the curve will vary by GS site**
- Early movers (pilots) will site in favorable zones
- **Liability frameworks** must balance incentives that foster early deployment with the potential for adverse site selection (with increasingly risky profiles) due to *moral hazard* as commercial-scale deployment evolves.

Benson, 2007
Liability
(Uncertainty of Interplay with Existing Statutes)

- Numerous Potential Claimants, Causes of Action.
  - Nuisance, trespass, negligence, other torts
  - Statutory liability (SDWA, CAA, RCRA, CERCLA, ESA; local statutes; potential “cap” of Cap-and-Trade)
  - Contractual and “New” Potential Carbon Market Exposures – required purchase of offsets, penalties / fines

- Spans State & Federal Authority
  - Jurisdiction, nature of the harm and attendant damages will interact to determine liability, compensability, and which (if any) party can transfer, release or assume liability.
Financial Responsibility (Certainty of a Sort...)

- An effective liability (risk management) framework will assure funds are available to pay for the necessary activity to:
  - **Minimize potential for releases** of the injectate from the containment zone over the long-term (post operational acts and confirmed stabilization); and
  - **Detect problems** before they adversely impact public welfare or the environment (MMV).

- **The remaining challenge?** Corrective (remedial) action, and to the extent necessary how damages will be redressed & up to what limit?
## Liability (Risk) Management Options

<table>
<thead>
<tr>
<th>Financial Responsibility Mechanisms</th>
<th>GS Project Phases</th>
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<tbody>
<tr>
<td></td>
<td>MMV (Injection / Operation)</td>
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<tr>
<td>1. Third-Party Instruments</td>
<td>✓</td>
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<tr>
<td>(Trust Funds, LOCs, Insurance, Bonds)</td>
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<tr>
<td>2. Self-Insurance</td>
<td>✓</td>
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<tr>
<td>(Financial Test, Corporate Guarantee)</td>
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<td>3. Public/Private Hybrids</td>
<td></td>
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<tr>
<td>Compensation Funds</td>
<td>✗</td>
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<tr>
<td>Risk Pooling Models</td>
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| EG | 6 |
Notable Liability Frameworks:
Each Has Strengths and Weaknesses; Risk Profile is Key

<Public / Private Frameworks>

1957 | Price-Anderson
Nuclear Indemnity

1968 | NFIA
Indemnity/Risk Pool

2002 | SAFETY ACT
Risk/Litigation Management

<Compensation (Trust) Funds>

1974 | SDWA
UIC Program

1980/1986 | CERCLA/SARA
Superfund

1990 | TAPAA/OPA
OSLTF / TAPLF

2007 | IRGC / IOGCC
State Compensation Funds