



Canada Update

CCS Legal and Regulatory Developments

IEA CCS Regulators Network
May 13-14, 2008, Paris

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Outline

1. Canadian CCS developments
2. Legal and regulatory issues
3. Current and future work





Canadian CCS Developments – Context

Two levels of government with an interest in CCS



Federal Government



Provincial Governments





Canada-Alberta ecoENERGY CCS Task Force

- Established in March 2007 to advise how industry and government can together advance deployment of CCS in Canada
- Report issued in January 2008 recommended:
 - \$2 billion in public funding for an initial set of projects
 - Regulatory clarity, building on existing regulations
 - Equal opportunity for CCS under GHG regulations
 - Collaborative framework for industry and government to coordinate actions and learnings
 - Stable financial incentives for subsequent projects
 - R&D to drive down costs of CCS

Access the full report:

<http://www.nrcan-rncan.gc.ca/com/resoress/publications/fosfos/fosfos-eng.pdf>





Projects

- Weyburn-Midale CO₂ EOR Project – Ongoing, 2Mt/yr
 - Several other CO₂-EOR pilots (Alberta, Saskatchewan, Manitoba)
- SaskPower Clean Coal Demonstration – NEW 1 Mt/yr by 2015
- Proposals for commercial-scale projects (oil sands, coal-fired electricity, acid gas injection, pipelines)
 - Upwards of 10 major projects in Western Canada

Research

- Storage mapping and feasibility
- Advancing capture technologies
- Economic and regulatory, including:
 - *IEA Weyburn-Midale CO₂ Monitoring and Storage Project – Phase II*
 - *CCS Research Group, Institute for Sustainable Energy, Environment, and Economy (ISEEE), University of Calgary - NEW*





Legal and Regulatory Issues – Overview for CCS

6

Regulation of Air Emissions:

- Federal and provincial regulations / regulatory frameworks

Regulation of CCS Activities:

- Existing regulatory regimes for oil and gas adequately cover many CCS activities
- Provincial jurisdiction unless:
 - Federal legislation trigger
 - CCS on Federal lands
 - Cross-boundary issues (e.g. pipelines, CO₂ migration)
- Only provinces can regulate injection activity

Outstanding issues need to be addressed





Legal and Regulatory Issues – Air Emissions Regulation

7

Proposed Federal Air Emissions Regulations

- GHGs & air pollutants; GHG Framework finalized in March 2008
- GHG regulations drafted 2008-2009; effective January 2010
- Effectively require new oil sands and coal-fired electricity plant (2012 or later) to do CCS by 2018
- Incentive for building “CCS-ready”
- Compliance options will provide incentives for investing in CCS
- Next steps:
 - Establish CCS-based emissions standard
 - Define “capture-ready”
 - Protocols for measuring and crediting CO₂ reductions

For more info: http://ec.gc.ca/doc/virage-corner/2008-03/541_eng.htm





Legal and Regulatory Issues – Air Emissions Regulation

8

Provincial Climate Change Plans

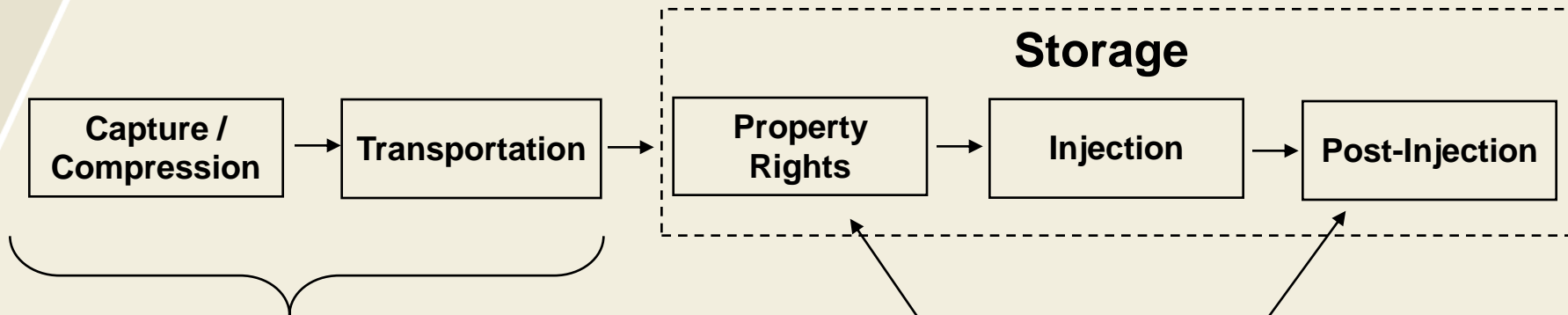
- 9 of 10 provinces have indicated intent to mitigate GHG emissions in some fashion
- Alberta – first jurisdiction in Canada to enact GHG regulations; came into force July 2007
 - Emission intensity reductions
 - Goal for CCS: 139 Mt/yr by 2050
- British Columbia
 - Revenue neutral carbon tax, on fuels (\$30/t by 2012)
 - Developing a cap-and-trade system for GHGs
- Saskatchewan
 - New electricity generation: emissions-free or fully offset
 - Enhanced oil recovery – develop CO₂ market for clean coal





Legal and Regulatory Issues – Direct CCS Regulations

CCS Chain



- Existing regulations & standards apply (e.g. construction, operation, public safety, occupational health & safety, economic regulation)
- **No major gaps to be addressed**

- **Majority of outstanding CCS legal/regulatory issues.**





Legal and Regulatory Issues – Direct CCS Regulations

10

Storage: Property Rights

- **Outstanding Issues** – no specific legislation on rights related to storing CO₂:
 - Acquisition of sub-surface rights / pore space ownership
 - Transferring right-to-store
 - Surface access
- Analogous regulations/legislation exists
 - oil and gas production, enhanced oil recovery, acid gas injection, natural gas storage
- **Canada-Alberta Task Force Recommendation:**
 - Review and amend existing regulations and legislation to cover CO₂
 - Oil and gas, water





Legal and Regulatory Issues – Direct CCS Regulations

11

Storage: Injection

- Existing regulations in place, including for:
 - CO₂ for enhanced oil recovery
 - Natural gas storage
 - Acid gas disposal
- **No major gaps to be addressed**





Legal and Regulatory Issues – Direct CCS Regulations

Storage: Post-injection

- **Outstanding issues**
 - Remedial liability for storage sites (provincial)
 - No established measurement, monitoring and verification standards
 - e.g. for complying with air emission regulations
 - Long-term liability:
 - health and safety (provincial)
 - in situ damage to resources (provincial)
 - climate change – from CO₂ leakage (fed and prov)
- **Canada-Alberta Task Force Recommendations:**
 - Assign and articulate liability responsibilities
 - Transfer long-term liabilities to governments
 - Create measurement and crediting protocols





Current and Future Work (Legal & Regulatory)

13

Provincial

- Alberta – a new Government-Industry ‘Council’ on CCS will address regulatory issues; report by end of 2008
- Saskatchewan – looking at extending oil & gas regulations; examining analogues in the mining sector for long-term liability
- British Columbia – feasibility of CCS for natural gas production; first jurisdiction in Canada to introduce legislation on rights for storing CO₂

Federal

- Finalize CCS-related details of GHG regulations
 - Protocols to build on existing work (e.g. London Protocol)

Other

- *IEA Weyburn-Midale Project - Phase II*: will address regulatory issues; ‘Best Practices Manual’
- *CCS Research Group (ISEEE)*: guidelines for protocols; frameworks for managing risks, including long-term liability

