

Interstate Oil & Gas Compact Commission

IOGCC Overview

PCOR Partnership Annual Meeting

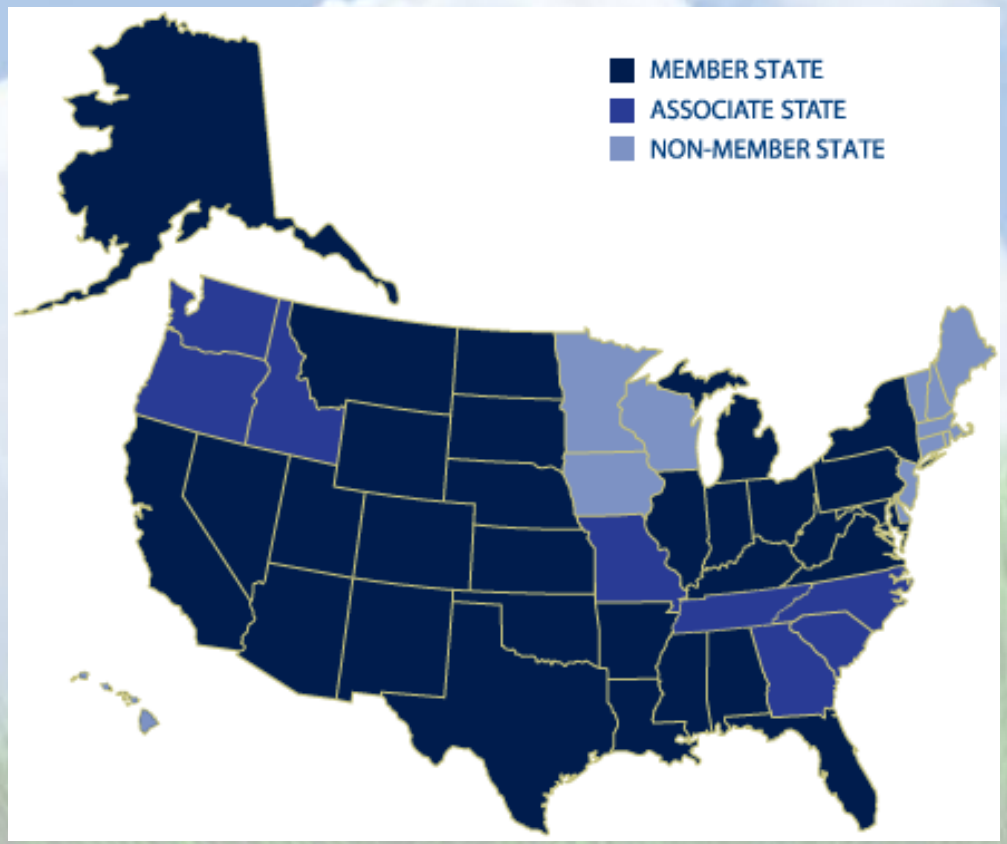
December 1-3, 2009

INTERSTATE Oil & Gas COMPACT COMMISSION

Today's Presentation

- Update on CCGS Task Force
- Introduction to IOGCC-SSEB Pipeline Transportation Task Force
- Summary of State Legal and Regulatory Actions utilizing IOGCC CCGS Task Force Model Statute and Rules

Member States



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Update on CCGS Task Force

Continuing its Efforts to Provide
Clarity to the Legal and
Regulatory Aspects of CCGS

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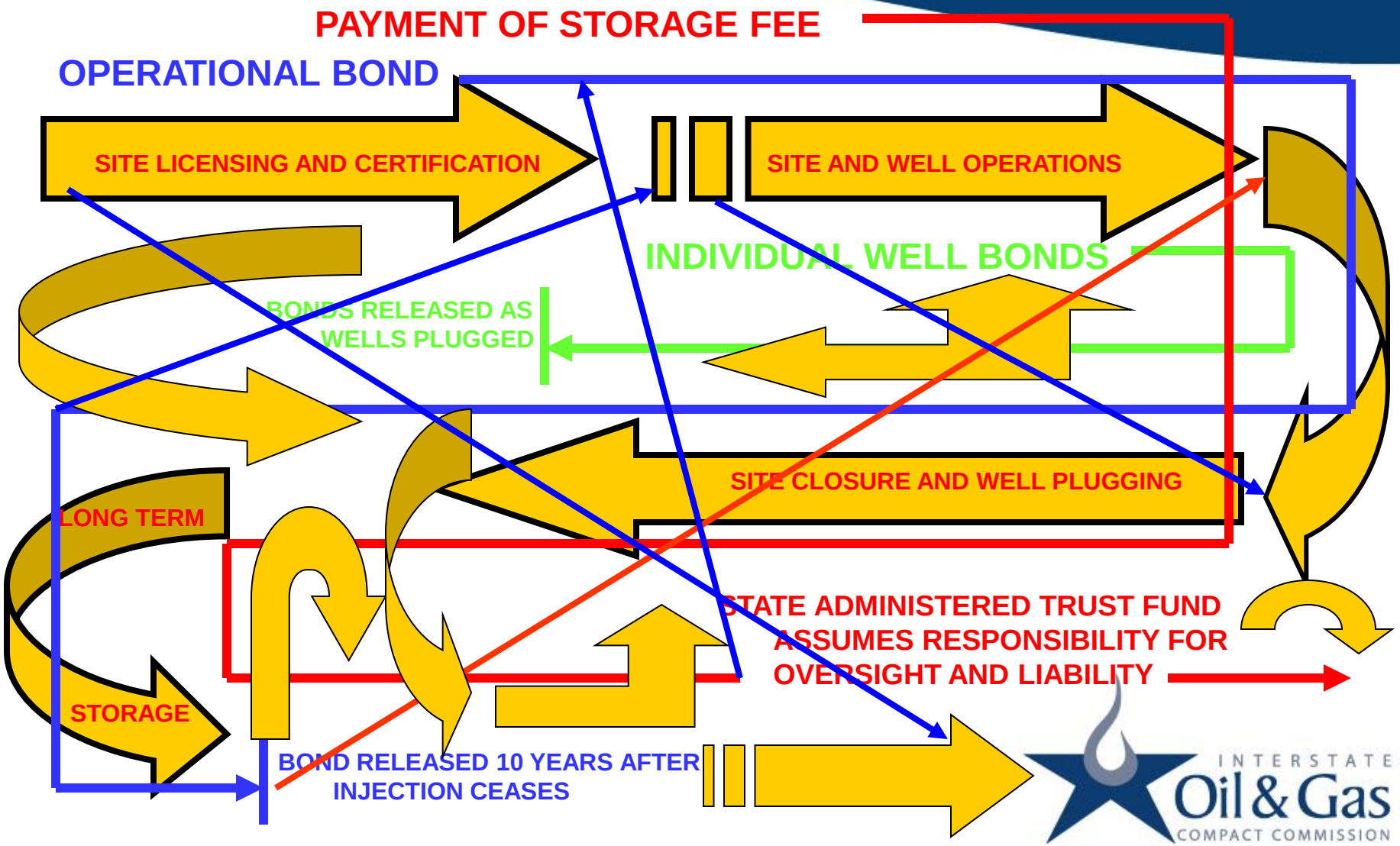
CGS REGULATORY FRAMEWORK



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“Journey Down Memory Lane”

- **Concept conceived at what has come to be known in IOGCC CO_2 “folk lore” as the “Alta Summit” in 2001.**
- **IOGCC Geological CO_2 Sequestration Task Force created by IOGCC Resolution in December 2002.**
- **Task Force extended - with name change to the IOGCC CCGS Regulatory Task Force – in October 2004.**
- **Phase I Report – 2005**
- **Phase II Report – 2007**
- **Funded by USDOE/NETL and worked closely with the seven DOE Regional Carbon Sequestration Partnerships.**

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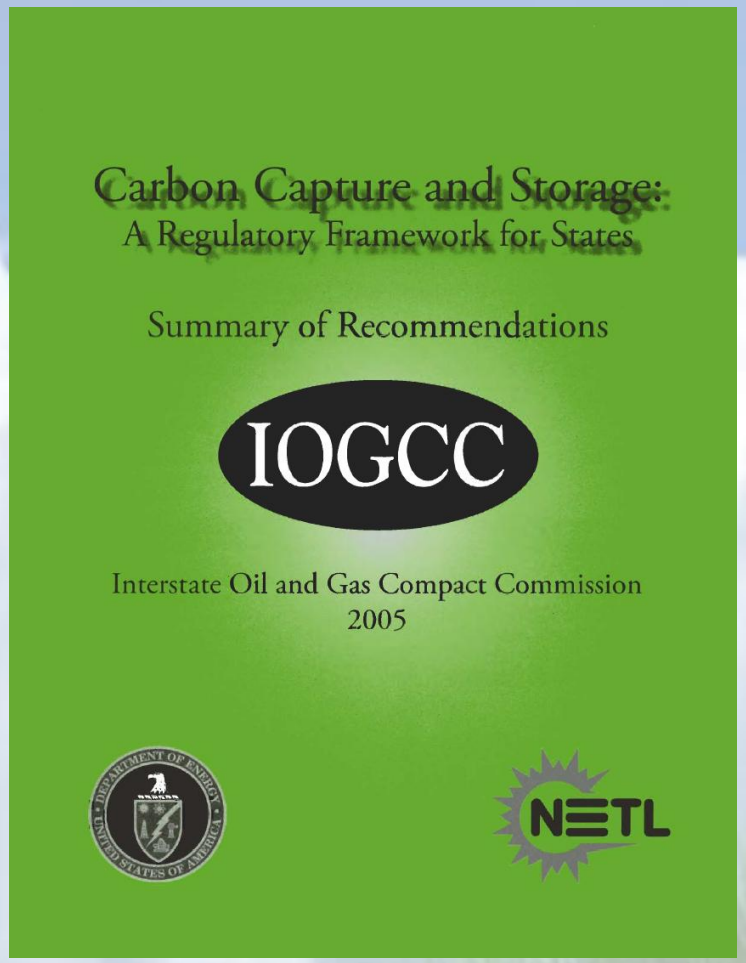
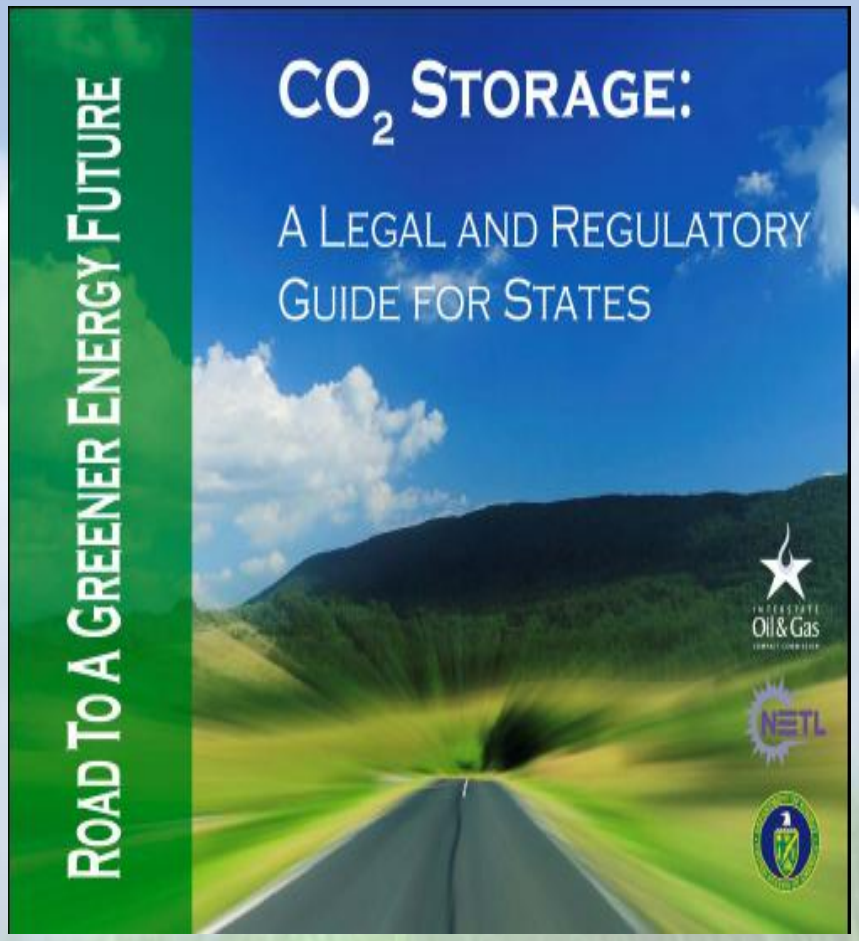
Brief Summary of Phase I Work and Recommendations



- Industry and states have 30 years experience in the production, transport and injection of CO.
- States have necessary regulatory analogues in place to facilitate development of a comprehensive CCGS regulatory framework.
- CO_2 should be regulated under a resource management framework to allow the application of oil and gas conservation laws which will facilitate development of storage projects.
- Involve all stakeholders including general public in the development of regulatory frameworks.

IOGCC Phase II Report



- Released in January 2008
- Summary of the report and a copy of the full report on CD-ROM.

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Task Force Participants Represented 15 States

- IOGCC member state and provincial oil and gas agencies
- DOE sponsored Regional Carbon Sequestration Partnerships
- Association of State Geologists
- US DOE
- Independent experts
- US EPA
- US BLM
- Environmental organization observer

Model Statutes and Regulations

Model Statute [1]

GEOLOGIC STORAGE OF CARBON DIOXIDE

Section 1. Legislative declaration; jurisdiction. [2]

(a) The Legislature of the State of _____ declares that (1) the geologic storage of carbon dioxide will benefit the citizens of the state and the state's environment by reducing greenhouse gas emissions; (2) carbon dioxide is a valuable commodity to the citizens of the state; and (3) geologic storage of carbon dioxide gas may allow for the orderly withdrawal as appropriate or necessary, thereby allowing carbon dioxide to be available for commercial, industrial, or other uses, including the use of carbon dioxide for enhanced recovery of oil and gas (EOR).

(b) The State Regulatory Agency shall have the jurisdiction and authority over all persons and property necessary to administer and enforce effectively the provisions of this article concerning the geologic storage of carbon dioxide. In exercising such jurisdiction and authority granted to it, the State Regulatory Agency may conduct hearings and promulgate and enforce rules, regulations, and orders concerning geologic storage of carbon dioxide.

Section 2. Definitions.

(a) ***Carbon dioxide.*** Anthropogenically sourced carbon dioxide of sufficient purity and quality as to not compromise the safety and efficiency of the reservoir to effectively contain the carbon dioxide.

(b) ***Oil or gas.*** Oil, natural gas, or gas condensate.

(c) ***Reservoir.*** Any subsurface sedimentary stratum, formation, aquifer, or cavity or void (whether natural or artificially created) including oil and gas reservoirs, saline

[1] Canadian provinces should replace "state" with "province" as appropriate.
[2] The purpose of this section is to make clear that the primary goal is to permanently store carbon dioxide to mitigate its impact on global climate change; however, given the commodity status of carbon dioxide, under certain circumstances states need statutory authority to regulate withdrawal of previously stored carbon dioxide for EOR and other uses that do not involve release to the atmosphere.

General Rules and Regulations

GEOLOGIC STORAGE OF CARBON DIOXIDE

Section 1.0. Applicability

The following rules and regulations shall govern the geologic storage of CO_2 in geologic reservoirs. These rules apply to all CO_2 storage operations occurring within the territorial jurisdiction of the state. [1]

Section 2.0. Definitions

The following terms, as used in these regulations for geologic CO_2 storage facilities, shall have the following meanings:
(a) **CO_2** means anthropogenically sourced carbon dioxide of sufficient purity and quality as to not compromise the safety and efficiency of the reservoir to effectively contain the CO_2.
(b) **CO_2 Facility** (CF) means, all surface and subsurface infrastructure including wellhead equipment, down hole well equipment, compression facilities and CO_2 flow lines from injection facilities to wells within the Geological Storage Unit (GSU), monitoring instrumentation, injection equipment, and offices. CF does not include the main transportation pipeline to the GSU and pump stations along that pipeline.
(c) **CO_2 flow lines** means the pipeline transporting the CO_2 from the CF injection facilities to the wellhead.
(d) **CO_2 injection well** means a well used to inject CO_2 into and/or withdraw CO_2 from a reservoir.
(e) **CO_2 Storage Project** (CSP) means the project in its entirety, including CF and GSU.
(f) **CSP Closure Period** means that period of time (10 years unless otherwise designated by the State Regulatory Agency (SRA)) from the permanent cessation of active CSP injection operations until the expiration of the CSP performance bond, unless monitoring efforts following the operational period demonstrate to SRA that a different time frame is appropriate.
(g) **CSP Operational Period** means the period of time in which injection occurs.
(h) **CSP Operator** means that entity required by SRA to hold the permit.
(i) **CSP Permit** means the permit issued by the state or province to operate a CSP.
(j) **CSP Post Closure Period** means that period of time after the release of the CSP performance bond.

[1] This document is drafted using the word "state". Canadian provinces should substitute either the word "province" or "provincial" as required. Similarly, Canadian provinces should substitute as appropriate the definitions of Underground Sources of Drinking Water (USDW) and Safe Drinking Water Act (SDWA) here and in the following text.

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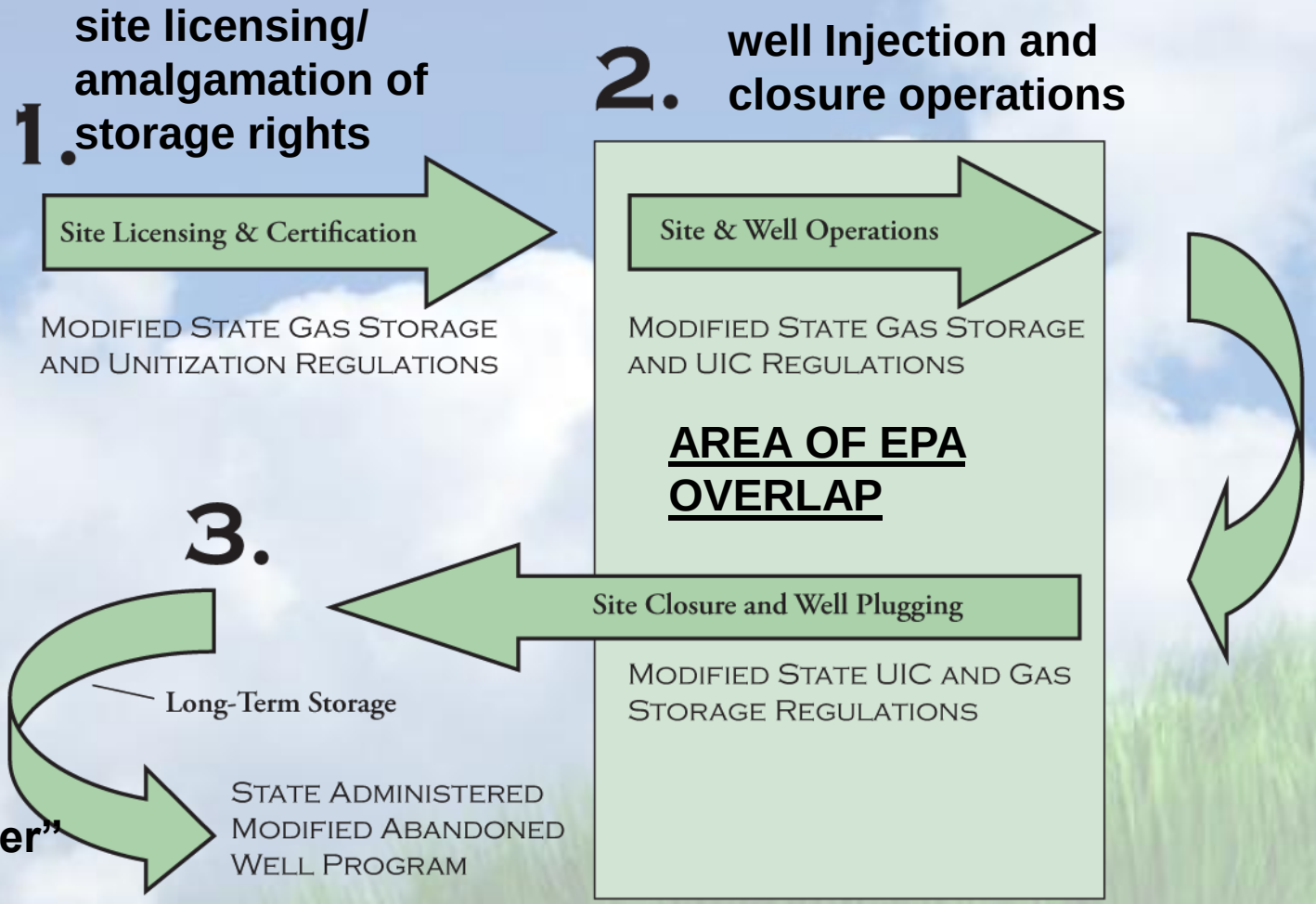
States and Provinces Currently Developing Or Adopted CO2 Legislation and/or Regulations

California
Indiana
Illinois
Kansas
Michigan
Louisiana
Montana
New Mexico
New York
North Dakota
Ohio
Oklahoma
Utah
Texas
West Virginia
Virginia
Alberta
British Columbia
Nova Scotia
Saskatchewan

States Needed to Complete CGS Regulatory Framework



Types of Risk/Liability/Damage Claims

- Local environmental damage
- Global environmental damage
- Loss of Credit
- Property loss/damage
- Health and safety liability
- Operational disruption
- Transfer of ownership
- Leakage monitoring and prevention

IOGCC CO2– Next Steps

- **Two final deliverables under our agreement with DOE/NETL:**

  (1) Work with the Regional Carbon Sequestration Partnerships to compile "Lessons Learned" from the partnership's regulatory experience to date in getting necessary approvals for the pilot projects.

  - Sent out a survey to partnerships last week.
  - Meeting scheduled in Santa Fe - January 21-22, 2010

IOGCC CO2– Next Steps

(2) Take another look at our legal and regulatory recommendations in light of partnership experience and developments since publication of the Task Force's Phase II Report.

-The Task Force met again in St. Louis in August.

- Based on discussions in that meeting, it will produce a "biennial review", that will make minor amendments to both the Model Statute and Rule as well as summarize the actions of the states in developing laws and regulations for CGS based on the IOGCC model.

IOGCC CO2– Next Steps

- **We also recognize that the Task Force had an enormous influence on the EPA process and the draft rules that circulated for public comment. Our rule provided the essential framework for their rule.**
- **Two Task Force members (Larry Bengal and Nick Tew) served on the EPA working group along with two GWPC representatives as "state co-regulators". They are still providing input.**
- **We provided comments on the Draft Rules during its public comment period.**
- **Larry Bengal and Nick Tew have remained on the working group and participated in a conference call as recently as 2 weeks ago that evaluated the public comments.**

IOGCC CO2– Next Steps

- **We hope that the CCGS Task Force will be further engaged by DOE/NETL in a "Phase III: to continue its regulatory work as concerns storage rights, liability issues (operational and post-operational) and cross border issues.**
- **We would also anticipate that the Task Force would again produce, in 2012, another "biennial review" that would include a review of state actions and the model guidance.**
- **IOGCC would continue its public outreach efforts. A new website – Groundworks – has been launched with Carbon Sequestration being one of the key topics.**
- **http://groundwork.iogcc.org/**
- **CCGS Task Force will also participate in the IOGCC-SSEB CO2 Pipeline Transportation Task Force (PTTF)**

IOGCC-SSEB Pipeline Transportation Task Force

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IOGCC CO_2 Next Steps - PTTF

- **Started with a kick-off meeting in Alaska in May.**
- **Followed with a project mid-point meeting in September in Biloxi.**
- **Robert Harms (ND) Chair**
- **Funded by DOE/NETL**
- **Working through and in conjunction with SECARB and SSEB.**
- **Participation of EPA, Transportation (PHMSA), BLM, DOE, FERC, NARUC, DOT and Industry**
- **Potential forerunner to intergovernmental effort likely to be mandated in federal climate change legislation.**

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IOGCC CO2 Next Steps - PTTF

- **Expect to produce a "scoping" document for states along the lines the IOGCC's Phase I CCGS Report.**
- **Primary Task – Identify barriers and opportunities for wide scale development of a CO2 pipeline transportation system. Specifically:**
  - **Educate decision-makers as to policy, legal, regulatory and liability frameworks for CO2 transportation.**
  - **Facilitate cooperation, collaboration, and communication among key stakeholders re pipeline planning and development.**
  - **Share findings and recommendations broadly**

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IOGCC CO_2 Next Steps - PTTF

- **The Task Force will discuss and address issues such as siting, rates, conditions of service, connectivity assurance, and differences likely between pipelines delivering for EOR and for storage with no EOR component.**

- **We have established three initial working groups that have been meeting via conference call.**

  - **John Harju of EERC is chairing one of these working groups as is Michael Moore of Blue Source.**

IOGCC CO_2 Next Steps - PTTF

- **One more face to face meeting of the full Task Force scheduled:**
  - **Wrap-up Meeting in May 2010 in Lexington, Kentucky**
- **Final Report by July 2010.**
- **Follow-on communication and technology transfer effort.**

Summary of State Legal and Regulatory Actions resulting from CCGS Task Force Model Statute and Rules

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Summary

- Generalizations:
  - Some states have opted to place regulatory authority in the DEQs, others with the Oil and Gas Regulator. In either event, each will have to work with the other.
  - Some states are pushing ahead full steam, others are awaiting an EPA final rule. This could be a DANGEROUS strategy.
  - Some states tackle the statute first and regulations second (Wyoming, North Dakota) while others, usually with a legislative mandate, are working to create legislative recommendations (Utah).
  - Some states have concluded that existing legislative authority is sufficient and are able to move directly to promulgation of final regulations (Kansas).

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Wyoming

Wyoming passed legislation in 2008 (two bills) and 2009 (three bills) covering in total the general legislative framework, pore space ownership (including rights, limitations, protections) and unitization. Liability legislation covering "post closure" and "long term stewardship" are still in development and may be dealt with in 2010. Work is also under way to develop comprehensive rules anticipated to be completed in December 2009.

General Provisions:	**Yes**
Pore Space Ownership:	**Yes**
Aggregation of Storage Rights:	**Yes**
Long Term Liability:	**No**

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North Dakota

At the request of the ND Industrial a task force drafted legislation. In advance of the 2009 legislative session, the Industrial Commission pre-filed the two bills created by the task force, one covering geologic storage and the other pore space. Both bills were passed and are were signed into law by Governor Hoeven on April 8, 2009.

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General Provisions:	**Yes**
Pore Space Ownership:	**Yes**
Aggregation of Storage Rights:	**Yes**
Long Term Liability:	**Yes**

Louisiana

The Louisiana Legislature passed legislation in 2009 addressing the geologic storage of CO2 -- HB 661, Act 517. It is a comprehensive bill. A process for developing Rules has not yet begun.

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General Provisions:	**Yes**
Pore Space Ownership:	**Yes**
Aggregation of Storage Rights:	**Yes**
Long Term Liability:	**Yes**

Kansas

The State of Kansas passed legislation in 2007 (HB 2419) that mandated development of regulations by July 1 of 2008. Although a public hearing was held in late March, and two open administrative meetings of the Kansas Corporation Commission over the summer, the commission has not yet finally approved the regulations. Another open administrative meeting of the commission is planned later this month. Proposed rule covers:

General Provisions:	**Yes**
Pore Space Ownership:	**Yes**
Aggregation of Storage Rights:	**Yes**
Long Term Liability:	**Yes**

Montana

Senate Bill 498 was signed by the Governor on May 6, 2009, becoming law. Most elements of the law will not be effective until the state is granted primacy authority by EPA under Rules currently being developed by EPA and not expected until 2011. Further development of rules in Montana is expected to await the grant of primacy authority by EPA.

General Provisions:	**Yes**
Pore Space Ownership:	**Yes**
Aggregation of Storage Rights:	**Yes**
Long Term Liability:	**Yes**

Texas

Three bills were passed in the 2009 legislative session that addressed various aspects of CCGS. HB 469 relating to the establishment of incentives for certain CCS projects; SB 1387 identifying regulatory jurisdiction for onshore CGS and specifying requirements for storage into formations productive of oil or gas or brine formations above or below oil or gas formations. SB 1796 relating to the development of offshore carbon geologic storage.

General Provisions:	**Yes**
Pore Space Ownership:	**No**
Aggregation of Storage Rights:	**No**
Long Term Liability:	**No**

Michigan

Although two different legislative drafts were informally circulated in 2009, one of which was significantly influenced by the IOGCC model legislation, it is not expected that the Michigan legislature will take up the issue again until 2010.

California

In 2006, California passed HB 1925 which mandated that the state produce a report containing recommendations identifying how the state can develop parameters to accelerate the adoption of GS strategies for the long-term management of industrial carbon dioxide. Finalization of the report is expected no sooner than 2010. Legislation is not expected to proceed until completion of the report.

Utah

- **In 2008, Utah passed SB 202 which mandated development of rules pertaining to CCGS by January 1, 2011. The law also requested recommendations as to the need for specific legislation. The state has created a working group in which responsibility for capture and transport issues has been assigned to the DEQ and storage issues to the Division of Oil, Gas and Mining. Rule development will likely await completion of EPA Rule development process.**

New Mexico

In December of 2007 the State released a Blueprint for the Regulation of Geologic Sequestration of Carbon Dioxide in New Mexico. During the 2009 legislative session, a comprehensive bill to regulate CO2 sequestration died in House committee. Senate Bill 208, the pore space bill, was passed out of the Senate, but no action was taken by the House prior to adjournment and the bill died.

West Virginia

At the Governor's request the legislature in 2009 took up the issue of CGS. The bill that passed (HB 2860) mandated creation of a CGS working group and the development of legislative rules that would implement the provisions of the statute. It also required that the working group prepare an interim report for the legislature by July 1, 2010 and a final report by July 1, 2011 that includes draft legislation addressing ownership of pore space. SB 507 also required that the West Virginia Clean Coal Technology Council prepare a study of carbon capture and control.

New York

Project specific legislation was introduced in June 2009 by Governor Paterson (Program Bill #45). It has been sponsored in the Assembly as A.8802 and in the Senate as S.53303. This legislation could still pass in 2009. The bill before the Assembly addresses pore space ownership, aggregation of storage rights and long term liability.

IOGCC CO2 Next Steps – Public Outreach

For more information

- http://www.iogcc.state.ok.us/
- http://www.iogcc.state.ok.us/carbon-sequestration
- **http://groundwork.iogcc.org/**
- Kevin Bliss

  iogccdc@verizon.net or 202-416-5062