Midwestern Governors Association
September 2009

Preliminary MGA Geologic Carbon Storage Utility Design Recommendations

OBJECTIVES OF THE POLICY

The Advisory Group agreed that the following objectives should inform the design of a geologic carbon storage utility (GSU):

- Create certainty by offering a known CO_2 storage option.
- Create an entity that can identify and implement an on-going state-wide or geologic basin-wide CO_2 storage management plan.
- Reduce the complexity and create transparent oversight of managing multiple projects in a region, selecting and characterizing storage sites, acquiring property rights, and addressing property damage and other liability issues.
- Manage the cost of geologic carbon storage development.
- Facilitate early storage resource exploration and development that will be necessary for wide-scale deployment of CCS.
- Help resolve the question of long-term liability by the creation of a stable, long-lived entity that can be responsible for the management of and liability from storage projects, unless or until those responsibilities are transferred to the state or federal government.
- Address issues that may arise as multiple projects are developed within basins that cross multiple jurisdictions (i.e., the CO_2 may migrate beyond or impact areas beyond a project's jurisdiction).
- Does not compete with existing commercial operations such as enhanced oil recovery or enhanced gas recovery that have the potential to accomplish needed storage.
- Provide a structure and mechanisms to account for carbon reductions from CO_2 storage within a future climate regime (e.g., cap and trade).

DESIGN RECOMMENDATIONS FOR STATE-WIDE OR BASIN-SCALE GEOLOGIC CARBON STORAGE UTILITY

1.0 STRUCTURE AND JURISDICTION

1.1 The geologic carbon storage utility (GSU) would be responsible for reliably receiving and distributing CO_2 to geologic storage sites, which it would also manage in perpetuity. For these services, the utility would recover its cost in rates, along with a reasonable, risked-based rate of return. Its value would be to create certainty and reliability in developing geologic storage at a system-wide scale. It is not intended to compete with otherwise commercial operations, such as enhanced oil recovery or enhanced gas recovery.

1.1.1 Providing for one entity within a jurisdiction [state or province] or in a basin is an effective structure for several reasons. A single entity may characterize storage project sites and coordinate development of multiple (and sometimes geologically connected) projects, manage operations and long-term management, carry out site remediation, reduce transaction costs and provide an easily identifiable entity for public interaction.

1.1.2 The utility provides for a business model that allows the utility to reliably receive and distribute CO_2 by managing both the transport and storage of the CO_2.

1.2 The authority to develop geologic carbon storage projects in a state or province, that are not otherwise commercial,[1] will be granted only to one entity in the jurisdiction. The utility offers a fee for service, which is regulated by the state or provincial utility regulatory commission. The utility may contract its commercial services and operations to private or public sector entities.

1.2.1 Jurisdictions may develop complementary policies to facilitate the development of projects within basins that cross state lines.

1.2.2 An example of a potential entity: a subsidiary of a larger utility that operates across jurisdictions in a particular geologic basin.

2.0 SERVICES AND OPERATION

2.1 The utility (authority) will provide geologic carbon storage services for a reasonable fee to any commercial entity seeking to geologically sequester CO_2 in the jurisdiction or basin.

2.2 The utility (authority) will explore and characterize potential sites for geologic carbon storage within the jurisdiction or basin.

2.3 The utility will manage geologic storage projects in the jurisdiction or basin. This includes but is not limited to:

2.3.1 Project site development, operation and closure

2.3.2 Long-term monitoring, maintenance, and verification

2.3.3 Any necessary remediation

2.4 The utility will coordinate the management of existing geologic carbon storage projects, both closed and operational, in the jurisdiction or basin.

2.5 The utility will develop and regularly update a plan for managing existing and estimated future geologic carbon storage projects.

2.6 The utility will determine when the storage resource in its certified territory has reached full capacity.

2.7 The utility will develop the infrastructure, such as pipelines, necessary to facilitate projects in the jurisdiction or basin.

3.0 OVERSIGHT

3.1 The state public utility commission will establish a program to certify carbon storage utilities that desire to engage in long-term third party geologic storage in geologic regions designated by the state oil and gas regulatory agency or other appropriate authority, and will grant a certificate of territorial authority to no more than one certified carbon storage utility for each designated region. Private sector entities or cooperatives may apply to be certified entities.

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[1] As stated in the objectives, this entity not compete with existing commercial operations such as enhanced oil recovery or enhanced gas recovery that have the potential to accomplish needed storage.

3.1.1 In order to be certified to engage in long-term geologic storage in a designated underground geologic formation, the applicant must demonstrate the requisite operational, managerial, and financial expertise and resources to safely and efficiently develop and operate a long-term carbon dioxide geologic storage facility.

3.2 The commission will determine the rates per ton of CO_2 that GSUs may charge industrial source users, based upon the reasonable costs of providing long-term underground geological carbon storage services, including reasonable returns for both debt and equity capital invested by the utility and for the attraction of additional necessary capital. The commission will develop rules to regulate geologic storage utilities, including:

3.2.1 rules designed to set the rates for the storage of carbon dioxide in facilities owned and/or operated by such entities;

3.2.2 rules designed to provide such entities with timely recovery of its financing, operation, construction, and maintenance costs, including reasonable returns on debt and equity capital;

3.2.3 rules to ensure such entities provide adequate, reliable, safe, and efficient carbon storage services; and rules to address when and under what circumstances revocation of a certificate of territorial authority shall take place.

3.3 The state oil and gas regulatory agency, or other appropriate agency, will designate underground geologic formations that it concludes hold the potential for safe and efficient geologic storage of carbon dioxide and are integrated and/or can best be developed by a single entity. These designations may be periodically updated by the state agency.

3.3.1 Prior to such a designation, a GSU may apply to the agency for a formation to receive such a designation.

3.4 The GSU must develop and regularly update a plan for managing existing and estimated future geological carbon storage projects. This plan must be submitted to the state oil and gas regulatory agency, or other appropriate agency, before receipt of a certificate of territorial integrity. An updated plan must be filed every 10 years with the agency until such as time as the agency concludes that further plan updates are no longer necessary and the agency has certified the determination that the resource has reached full storage capacity.

3.5 The state oil and gas agency, or other appropriate agency, will develop rules for the submission and approval for each storage regional management plan. The oversight agency may require a revision to a management plan at any time.

4.0 PROPERTY RIGHTS AND LIABILITY

4.1 All liability associated with geologic carbon storage projects will be held by the utility (authority).

4.2 The utility (authority) will purchase all surface and subsurface property rights necessary to develop and operate geologic carbon storage projects and pipeline infrastructure.

4.2.1 (Option 1) The state will declare suitable pore space below 2,500 feet and not associated with hydrocarbon development to be accessible for public use related to the geologic storage of carbon dioxide. A fee of no greater than $XX per acre will be provided to surface property owners for use of pore space.

4.2.2 (Option 2) The appropriate state or provincial agency will develop a process that allows for the utility (authority) to unitize property rights under a project. In order to unitize a project, the utility (authority), must first obtain 51 percent of the property rights necessary to develop the project.

4.3 The state or province grants the utility (authority) the right to petition the appropriate state or provincial agency for the condemnation of the surface and subsurface property necessary to develop geologic carbon storage projects and pipeline infrastructure.

FEES AND REVENUES

4.4 The utility will operate on a fee for service basis, through a tariff that is approved through a state or provincial utility regulatory commission.

4.4.1 The fee will be applied by the utility to any commercial operation that contracts with the utility to manage CO_2 for injection purposes.

4.4.2 The utility will set aside a portion of its revenue to cover the very long-term management of CO_2, to cover the period when revenue declines or ceases due to lack of additional storage capacity.

4.4.3 The utility may recover all costs and fees associated with:

4.4.3.1 Providing services and managing operations indentified that are identified in section 2.0, including all exploration and development prior to the contracting for service in its rates.[2]

4.4.3.2 Property rights acquisition and liability management associated in section 3.0

4.4.3.3 Very long-term management costs identified in section 4.1.2.

4.4.4 The utility will be able to recover a reasonable rate of return for its services.

4.4.4.1.1 Note: Funds could be periodically reviewed and adjusted to accurately address the risk profile of the projects that are covered within a jurisdiction or basin.

[2] There will be an initial period when this utility (authority) will be undertaking significant saline formation exploration and development before many capture projects come on line and revenue is generated through a fee for service.

4.5 Other potential funding

4.5.1.1 Escrow funds that are not co-mingled in order to have funds readily available when needed.

4.5.1.2 Provide an initial one-time fund or other mechanism through enabling legislation to finance the initial site selection and characterization needed to develop projects.

FEDERAL BACKSTOP

While the Advisory Group believes that states, or an association of states, will be best suited to regulate most aspects of development of storage resources and regulation of geologic storage utilities, the Advisory Group also believes that a federal program should be established as (1) an option for states, in order to ensure rapid scale up; or (2) a backstop, should some states fail to create a geologic storage utility framework and develop their storage resources on their own within a reasonable period of time. Such a federal program should have the following key elements:

- States, either individually or in association with one another, may assert primary jurisdiction over geologic storage utilities. However, as mentioned above, federal authority may be asserted or requested if states do not act to develop their storage resources in a reasonable period of time.

- The federal backstop program should assess and identify geologic regions of saline formations that should optimally be managed by one entity, with the assistance of the U.S. Geological Survey, in conjunction with applicable state geologic surveys.

- The federal backstop program should provide for geologic storage utility certifications of territorial authority, giving certificated entities authority to manage specific geologic storage regions. Eligible entities should include private companies, non-profit entities, states, or associations of states, provided such entities demonstrate their financial, technical, and managerial capability.

- The federal backstop program should provide authority to the Federal Energy Regulatory Commission (or an analogous federal agency) to approve cost-based rates that certificated geologic storage utilities may charge, including appropriate risk-based rates of return.

- The federal backstop program should also provide for establishment and oversight of management plans that address, at a minimum, the following: ensuring total basin storage capacity is maximized; ensuring interference between projects is minimized; "back-up" capacity to avoid interruptions in CO_2 off-take. This oversight, as it pertains to non-federal lands, should be delegated to state agencies, who have historically led the management of state-based subsurface resources.