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## Developing CCS Programs Nationwide

*Law360, New York (January 15, 2010)* -- Even as Congress continues to debate the possibility of climate change legislation, significant progress is being made by companies and states interested in assuring that there will be a place in the nation's energy future for coal-fired electric power generation.

Much of this effort is being focused on carbon capture and sequestration technology as holding the promise of being able to store carbon dioxide emissions from power plants and industrial facilities underground in deep storage sites. With several hundreds of years of storage potential at many locations across the nation, CCS is attracting much attention.

In a first of its kind development, American Electric Power and Alstom Power Inc. have partnered to capture and geologically store CO<sub>2</sub> removed from the 1300 mW Mountaineer Plant located at New Haven, W.Va.

The project, which began in 2009, is currently operational and captures 15 percent of the plant's emissions. This will result in some 100,000 tons of CO<sub>2</sub> being injected annually for two to five years. The injection formations are 7,800 and 8,200 feet deep. The CO<sub>2</sub> emissions are being captured using a chilled ammonia process.

This demonstration project was authorized under legislation passed by the West Virginia Legislature 2009. The legislation established a carbon capture and storage operational regulatory program and established a working group to assess issues not addressed in the legislation to include property issues and long-term liability.

CCS facilities are authorized by the legislation to the extent that they hold an underground injection control permit authorized by state law. W.Va. Code 22-11A-3(b).

The working group is required to issue a final report to the Legislature by July 1, 2011, which would address such issues as the ownership and acquisition of pore space and

responsibility for long-term liability. Resolution of these issues will be critical to the Mountaineer project progressing beyond its initial stage.

Much activity is occurring around the country in the development of state-based CCS programs. Among these initiatives are the following:

## **IOGCC**

In 2007, the Interstate Oil and Gas Compact Commission (“IOGCC”) issued its model program for the storage of carbon dioxide in geologic formations.

Even though the U.S. Environmental Protection Agency is applying the Safe Drinking Water Act regulatory program to CCS facilities, the IOGCC model program is premised on the belief that the regulation of CO<sub>2</sub> geological storage should be left to the states, rather than the EPA.

With respect to property rights, the IOGCC model program provides that an applicant for any such project should acquire the property rights to use pore space in the geologic formation for storage.

While much of the IOGCC’s model program addresses the need to acquire property rights through negotiation or eminent domain, the model program specifically states that the IOGCC is less concerned about what mechanism is used to acquire those rights and is more concerned that all necessary property rights be acquired by valid, subsisting and applicable state law.

Following completion of the project, an operator would be obligated to monitor the project to assure its integrity. At the completion of that period, title to the facility would be transferred to the state and the operator and all generators of CO<sub>2</sub> injected would be released from all regulatory liability.

The program establishes a trust fund which would assess a fee on each ton of CO<sub>2</sub> injected. The trust fund provides the financial resources for the state to take title to project at the end of its operating life.

## **Kansas**

In 2007, Kansas established the authority to develop rules for CCS facilities. Kan Stat. Ann. §§55-1637 through 1640. Proposed administrative regulations issued in March 2009 address operational requirements for an environmental permitting program.

Among those requirements is that the applicant must hold necessary property and mineral rights and own financial instruments that demonstrate financial responsibility. Kansas law does not define who owns pore space nor does it define the level of financial responsibility required.

To obtain a post-closure determination, the facility operators must demonstrate that the plume and storage pressure has stabilized.

Upon written approval of post-closure status, the operator would plug the remaining monitor wells at which point the CO<sub>2</sub> storage facility permit would be revoked and any financial assurance instrument would be released. All future remediation or monitoring activities would be performed by the state.

## **Louisiana**

In 2009, the Louisiana Legislature passed new CCS legislation. Louisiana R.S. 30:1101 through 1111. This bill authorizes expropriation by the state or certain corporations engaged in CCS not only for a storage facility but also for pipelines for transportation.

Ten years, or any other time frame established by rule, after cessation of injection, a certificate of completion of injection operations would be issued at which time the storage operator, generators of the carbon dioxide, the owners of the carbon dioxide, and all other owners otherwise having an interest shall be released from any and all regulatory duties or obligations and any other liability associated with or related to the storage facility. The statute authorizes a storage operator's fee.

## **Montana**

The Montana legislature passed CCS legislation (SB 498) in 2009 which established a CCS regulatory framework and addressed pore space ownership unless otherwise documented, the surface owner owns the pore space for geologic carbon sequestration.

The bill also protects the existing rights of mineral owners and does not change common laws regarding surface and mineral rights. Operators will pay the state of Montana a fee on each ton of CO<sub>2</sub> injected into a storage reservoir based on anticipated actual expenses that will be incurred by agencies implementing the program.

Prior to project completion, an operator is liable for the operation and management of the CO<sub>2</sub> injection well, the storage reservoir and the injected or stored CO<sub>2</sub>.

The completion and transfer of ownership and liability from the operator to the state is a process that takes 30 years (a) 15 years after injection of CO<sub>2</sub> ends, a certificate of completion will be issued to the operator if the operator is in full compliance of all rules and (b) for a period of an additional 15 years after the certificate of completion is issued, the operator must continue adequate monitoring of the wells and reservoir and continue to accept all liability.

Following the 15 year period of required monitoring and verification, if the operator has title to the storage reservoir and the stored CO<sub>2</sub>, it may transfer the title to the state if the operator meets all requirements.

Once the title is transferred to the state, the state is granted all rights and interests in and all responsibilities associated with the geologic storage reservoir and the stored CO<sub>2</sub>.

The transfer releases the operator from all regulatory requirements and liability associated with the reservoir and the stored CO<sub>2</sub>. If the operator does not transfer title to the state, the operator accepts liability indefinitely for the reservoir and the stored CO<sub>2</sub>.

## **North Dakota**

In 2009, Senate Bills 2139 (pore space and property issues) and 2095 (carbon dioxide storage operational issues) were enacted into law.

This legislation creates a legal and regulatory framework for carbon capture and storage and addresses pore space and property issues relevant to carbon capture and storage, including placing title to pore space in all strata underlying the surface with the owner of the overlying surface estate.

If a storage operator does not obtain the consent of all persons who own the storage reservoir's pore space, the state may require that the pore space owned by nonconsenting owners be included in a storage facility and subject to geologic storage.

This is accomplished through the amalgamating provision, which is similar to unitization, requiring the consent of 60 percent of the property owners. Multiple funds are established to defray the expenses incurred by regulatory agencies throughout the carbon sequestration process.

The actual fee amount is to be based upon the anticipated expenses that will be incurred in regulating storage facilities during their construction, operational, and preclosure phases.

The storage operator has title to the carbon dioxide injected into and stored in a storage reservoir and holds title until a certificate of project completion has been issued.

While the storage operator holds title, the operator is liable for any damage the carbon dioxide may cause, including damage caused by carbon dioxide that escapes from the storage facility.

After project completion and application for closure, consideration will be given to issuing a certificate of project completion. Such certificate may not be issued until at least 10 years after carbon dioxide injections have ended.

Once a certificate is issued, title to the storage facility and to the stored carbon dioxide transfers without payment of any compensation to the state and the storage operator

and all persons who generated any injected carbon dioxide are released from all regulatory requirements and other liability associated with the storage facility.

## **Oklahoma**

Also in 2009, Oklahoma passed the “Geologic Storage of Carbon Dioxide Act” (S.B. 610). The act provides the legal framework to encourage the long-term geologic storage of carbon dioxide in Oklahoma.

The Corporation Commission is granted the authority to grant certificates of public convenience and necessity and to authorize storage facilities which allows the storage operator to initiate the condemnation action necessary to site the facility.

The act is almost silent with regard to addressing potential liability associated with CCS activities. However, it provides for the establishment of financial sureties or bonds.

## **Wyoming**

In 2009, Wyoming passed three bills to address ownership and liability issues related to geological storage of carbon dioxide.

H.B. 57 clarifies that mining and drilling rights will be prioritized over geologic sequestration activities.

H.B. 58 provides that the injector holds the title and liability for sequestered carbon dioxide and all other materials injected during the sequestration process.

H.B. 80 establishes a procedure for unitizing geologic sequestration sites, whereby pore space rights from multiple parties would be aggregated for the purposes of a carbon storage project as long as 80 percent of the parties approve the project.

This suite of bills complements that which was passed in 2008. H.B. 89 identified ownership of pore space. H.B. 90 established an operational regulatory program.

The 2008 legislation declared that the ownership of all pore space in all strata below the surface lands and waters of the state is declared to be vested in the owners of the surface above the strata.

## **Conclusion**

The efforts that are occurring in the various states are setting the legal and regulatory framework for CCS projects even in advance of the development of federal legislation. This work is allowing the current development of experimental CCS projects across the country.

If commercial scale CCS projects are to be developed in time to play a role in framing national policy with respect to global climate change, these efforts to address legal and regulatory issues must be accelerated.

--By David M. Flannery, Jackson Kelly PLLC

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