

# CCS REGULATION

## NEWSLETTER

### **IEA believe CCS a crucial need**

*In order to reach CO<sub>2</sub> emission targets by 2050, CCS regulation needs to be defined*

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### **Texan Regulation instigates TCEP**

*TCEP announced after new regulation grants tax incentives to projects which capture over 70% CO<sub>2</sub>*

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### **Chu calls for Carbon Cap**

*Secretary Chu calls for directive from the Senate on Environment and Public Works*

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## WELCOME TO THE SECOND CCS REGULATION NEWSLETTER

This newsletter is produced by the MIT Carbon Capture and Sequestration Technologies. It is designed to be a quarterly report to keep the reader up to date with the current CCS regulatory activities in the US.

This newsletter will look into the regulatory developments of Carbon Capture and Storage (CCS) at both the Federal and State level in the United States.

New bills, involving CCS, have been introduced to the US Senate in the last few months. We will look at these including S. 1733 or the Kerry-Boxer bill which includes several provisions addressing CCS. This continued activity at the federal level dealing with CCS shows how there is a greater awareness of CCS technology and of the need for its legal definition.

Different states are further along defining CCS regulation than the federal government. In some cases state regulation is forcing the federal government to take action. There are 31 states which currently have some sort of CCS regulation in their framework including Illinois, Kansas, Montana, North Dakota, Pennsylvania, Texas, and Wyoming. Some of these will be looked at in more detail. The majority of the states are passing laws which deal with pore space and site ownership post-injection.

CCS pilot plants and R&D sites are forcing states to create and define the legal and regulatory framework for the permitting and operation of these projects. For example the AEP Mountaineer plant in West Virginia, which started carbon capture off a 25MW slip stream on October 31, 2009. In order for Mountaineer to be permitted to inject CO<sub>2</sub> into the ground, the West Virginia house of representatives passed HB 2860 in April 2009. Section 11 of this bill defines the requirements for CCS permits and establishes a state agency responsible for establishing standards and rules for the permitting of CCS operations. As a result the AEP Mountaineer CCS project was issued the first carbon sequestration permit in the US.

House Bill 2860 text: [http://www.legis.state.wv.us/bill\\_status/bills\\_text.cfm?billdoc=HB2860%20ENR%20SUB.htm&yr=2009&scstype=RS&i=2860](http://www.legis.state.wv.us/bill_status/bills_text.cfm?billdoc=HB2860%20ENR%20SUB.htm&yr=2009&scstype=RS&i=2860)

News article about sequestration permit: <http://www.statejournal.com/story.cfm?func=viewstory&storyid=58240>

In the next newsletter, along with the latest US CCS regulatory news, there will be an update from the UK of the progress of their CCS regulation.



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## Federal CCS Regulation

The Senate bills which we looked at last issue: SB. 1013, SB. 1502, SB. 1134, and House of Representatives bill HR. 1689 have had no further action on them since the last newsletter (at the date of publication). However other bills concerning CCS regulation have been brought to the Senate in the last few months.

The Clean Energy Jobs and American Power Act (SB.1733): Sen. John Kerry (D-MA) introduced bill SB. 1733 (Kerry-Boxer bill) to the senate on September 30, 2009. Besides aiming to have a 20% emission reduction by 2020, the bill contains a number of provisions which deal with CCS. These include: Requiring the EPA to submit a report to Congress outlining a comprehensive strategy to address the key legal and regulatory barriers to the commercial-scale deployment of CCS; Requiring the EPA to develop a systematic approach to the certification and permitting of geological CCS sites; The establishment of a multi-stakeholder

task force to conduct a study for the legal framework of geological sequestration sites and activities; Establishment of a program for the demonstration and early deployment of CCS technologies; Establishment of new performance standards for new coal-fired-power plants permitted in 2009+; And directs the EPA to provide a bonus allowance for stored CCS.

<http://www.wri.org/stories/2009/10/carbon-dioxide-capture-storage-and-s-1733-clean-energy-jobs-american-power-act-2009>

Sen. John Barrasso, (R-WY). Introduced Pore Space Bill on October 23, 2009. This bill addresses the pore space ownership below federal lands. The bill is modeled after the Wyoming legislation which passed a similar bill in February. The bill defines that the government owns the pore space under the federal lands and that the injector is responsible for making sure the CO<sub>2</sub> stays there and is liable if it leaks out. Additionally, the bill specifies that the mineral estate will be dominant over the pore space estate; that is, if a mineral owner's use of the subsurface

would conflict with the use of a pore space owner, the mineral owner will prevail.

<http://climate.alston.com/?entry=2721>

Sen. Tom Carper (D-DE) and 7 other senators making up the "coal group" released draft legislation that would provide funding for the development of carbon capture and sequestration technologies and expand the supply of emission offset credits on September 21, 2009. The proposal would push back deadlines contained in the Waxman-Markey bill for new coal-fired power plants permitted between 2009-2015 to install CCS, and create a CCS early deployment program that would provide \$1 billion annually for 10 years. As written, the proposal also would substantially expand the amount of offset credits compared to the Waxman-Markey bill by removing a mandate for EPA to establish performance standards for methane emissions from coal mines and landfills. The Waxman-Markey directive to EPA effectively would prohibit offset projects involving such facilities.

<http://www.vnf.com/news-policyupdates-389.html>



## IEA believes CCS is crucially needed.

The IEA believes that CCS could provide 19% of the emissions reduction needed by 2050. In order to implement this reduction, 3000 CCS projects are needed to be in place by 2020. The IEA has published a CCS roadmap in which it outlined the regulatory environment needed for this to occur.

*Roadmap:* [http://iea.org/papers/2009/CCS\\_Roadmap.pdf](http://iea.org/papers/2009/CCS_Roadmap.pdf)

*News item:* <http://www.elrst.com/2009/10/22/iea-believes-carbon-capture-and-storage-is-crucial/>

# CCS REGULATION

## State CCS Regulation

The Majority of the states which are passing laws deal with pore space and site ownership post- injection. Most states are defining that the surface land owners own the pore-space in the underlying geology (North Dakota SB 2139; Montana SB 298). That site ownership will pass to the state after an allotted time ( North Dakota SB 2095, Montana SB 498) and that the right to recover mineral resources take precedence over CO<sub>2</sub> injection ( Wyoming HB90).

### North Dakota

North Dakota's senate passed 3 laws in 2009 related to CCS.

SB 2221 offers tax credits facilities which capture CO<sub>2</sub>.

SB 2095 lays groundwork for CO<sub>2</sub> injection, defining that the injector is responsible for the injected CO<sub>2</sub> for 10 years post injection after which the liability is transferred to state.

SB 2139 defined pore space and the pore space ownership as the owner of the overlying surface land.

For more information about these 3 senate laws, please go to:

<http://www.ndbusinesswatch.com/legislative-briefs/legislation-watch/>

### Montana

Montana Senate passed SB 498 April 2009. This bill defines that the surface owner owns the pore space for geologic carbon sequestration. Geologic operators are required to pay the state of Montana a fee on each ton of CO<sub>2</sub> injected into the ground. The operator is responsible for CO<sub>2</sub> safety during injection and 15 years post-injection after which the site can be transferred to the state.

For a summary of the bill please visit: <http://www.bigskyco2.org/files/pdfs/SBill498.pdf>



### Pennsylvania

House Bill 2200, signed October 15 2008, required an independent assessment of the CCS feasibility in Pennsylvania by November 1, 2009. This included assessment of infrastructure, regulatory standards, geologic, liability and insurance issues.

At the time of publication the assessment had not been released to the public.

For more information about HB 2200 please visit: [www.dcnr.state.pa.us/info/carbon/ccs.pdf](http://www.dcnr.state.pa.us/info/carbon/ccs.pdf)

## Texas Regulation allows New Projects

Texas legislation HB 469 allows projects which capture 70% and greater of CO<sub>2</sub> emissions to qualify for more than \$100 million in tax relief and other advantages.

This new regulation has given many projects the green light. TCEP ( Texas Clean Energy Project) headed by Summit Power group is one such project. TCEP was incentivized by this legislation and is now working towards a 400MW Gross, IGCC coal fired power plant near Midland- Odessa, West Texas. The aim is for construction to start in 2010 and to be operational by 2014. The CO<sub>2</sub> is going to be used for EOR in the surrounding oil fields.

<http://sequestration.mit.edu/tools/projects/tcep.html>

## Secretary Chu calls for Carbon Cap

Secretary of Energy Steven Chu advocated for CCS in a testimony to the Senate for Environment and Public Works October 27, 2009. He called for a clear directives like a cap on carbon which would give the industry long term directive and certainty.

<http://www.energy.gov/news2009/8213.htm>

### Images:

Page 1: Holly leaves

<http://karenswhimsy.com>

Page 2: Cooling stack

Photographer Joe Gough

[www.istockphoto.com](http://www.istockphoto.com)

Page 3: Mountaineer Power plant

<http://www.wvpubcast.org/newsarticle.aspx?id=11832>

*This newsletter was constructed using information from internet searches. All the websites used have been cited.*

*Holly Javedan compiled this report. For more information, questions and comments please email [javedan@mit.edu](mailto:javedan@mit.edu). Thank you.*