

CCS REGULATION

NEWSLETTER

Welcome to the CCS Regulation newsletter. This is produced by the **MIT Carbon Capture and Sequestration Technologies Program**. It is a quarterly report designed to keep the reader up to date with the current regulatory news and issues surrounding Carbon Capture and Storage (CCS).

For more information about the program please see <http://sequestration.mit.edu>

Interview with Dr. Sean McCoy

Dr. Sean McCoy was the manager of the CCSReg Project before recently moving to Paris, France to take up a 2 year job at the IEA CCS unit. We asked him a few questions about the CCSReg Project and the IEA CCS unit.

CCSReg Project

What is the CCSReg Project?

The Carbon Capture and Sequestration Regulatory (CCSReg) Project was an interdisciplinary group of researchers who developed recommendations for the regulation of deep geological sequestration of CO₂ in the US. The Project was anchored at Carnegie Mellon University with collaborators at the University of Minnesota, the Vermont Law School and the Washington DC law firm Van Ness Feldman. We were lucky to get primary funding from the Doris Duke Foundation. They trusted our team and they allowed us a great deal of liberty to use their funding as we saw fit.

What was your role in the CCSReg Project?

I was the manager of the project, co-ordinating the work between the 4 project participants, as well as contributing to the work on certain issues. The 4 participants met and worked through problems together through consensus building. I also did most of the editing to publications, advised Ph.D. students, and worked on other projects.

What has the CCSReg Project produced?

Our initial report discussed the results of our gap and barrier analysis. We identified a number of regulatory and legal barriers to larger scale deployment of CCS technology and*Continued on the next page*



Plant Barry where Southern started CCS in June 2011

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discussed the various options to remove them. After identifying the main issues we worked through each one. The subsequent policy briefs recommended specific options to address each of these issues. http://www.ccsreg.org/policy_briefs.html CCSReg also published a model legislation and other papers. http://www.ccsreg.org/working_papers.html The last major activity of the project was to hold a workshop in Washington DC in October 2010.

What was the Washington DC workshop?

The workshop in Washington in October 2010 was designed to present our series of recommendations and policy briefs to those who we saw as our primary stakeholders: Federal legislators and regulators from Congress and governmental agencies. Also attending the conference were representatives from the energy industry, the finance sector, NGO's and academics.

There were dynamic discussions and a general appreciation of the depth of coverage of the topics. In spite of the positive feedback, many participants thought that the recommendations were not feasible at that political and economic time (last summer there had been the collapse of serious efforts to regulate emissions from Congress). Unfortunately not much has changed since then. Apart from the couple of Bills currently before Congress, dealing with CCS demonstrations, moving to regulate full-scale deployment is still a long way off. Arguably this is premature if you're not going to deal with climate policy.

What is Adaptive Regulation that you presented at the DC workshop?

Regulation should reflect the best knowledge available and the conditions on the ground. Regulations currently don't get updated regularly, as promulgating new regulations is a very involved process. We recommended a two-stage regulation process where initial regulation would get the early projects off the ground, followed by a more comprehensive regulatory framework that is regularly reviewed and updated, if necessary, to reflect learnings from operating projects. The EPA Class 6 has created an initial set of regulations for CO₂ injection and most demonstrations will now be conducted under this classification. This two-stage Adaptive Regulation process is particularly important with respect to CO₂ storage. Capture and transport are covered by more traditional industrial regulations.

What is the current status of the CCSReg Project?

The workshop in DC was the culmination of the CCSReg Project. Currently the team is working on producing a book that will be the capstone of the Project and will be released later this year. The report will be a compilation of all the reports and policy briefs we have produced including some revised articles in light of the recommendations from the workshop. More information can be found at <http://www.ccsreg.org/>

IEA

What is the main activity of the IEA CCS unit?

The main activity of the CCS unit is analysis to support government policy on CCS. We analyze issues in strategy

and policy development, in economic and technical challenges, as well as in legal and regulatory areas. I am primarily involved in analysis to support development of regulatory frameworks for CO₂ storage. In this area, my colleagues and I work with IEA member and non-member governments around the world assisting them with development of their CCS regulatory frameworks. Another major activity is to facilitate knowledge sharing via the IEA Regulatory Network which has quarterly webinars and an annual meeting which discuss the legal and regulatory issues and developments around the world.

How is the CCS unit involved with different government's CCS regulation?

The IEA is involved when requested by governments. The level of engagement depends on the country's needs and where they are in their regulatory development process and policy decisions on CCS. In some situations our involvement is simply through round tables and or conferences that help the government determine its needs. In other situations our involvement might be a little more intensive, for example we may be involved with their CCS regulation development process. However we do not develop statutes and regulations for the government.

What is the IEA CCS model regulatory framework?

The rapid expansion and scale up of CCS technology and activity requires a number of regulatory issues to be addressed. The model CCS regulatory.....*Continued on the next page*

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framework contributes by highlighting twenty nine different regulatory issues that may need to be considered by governments in developing CCS regulatory frameworks. The model framework also provides examples of how countries (and states or provinces) have addressed these issues. To use the document, governments have to identify the issues that are important in their jurisdiction and then address these issues according to their own legal traditions.

http://www.iea.org/ccs/legal/model_framework.pdf

Additional comments: May 2011. The IEA released the second bi-annual IEA legal and regulatory review of the main CCS regulatory developments and jurisdictions around the world. http://www.iea.org/Papers/2011/ccs_legal.pdf

We thank Sean McCoy for his contribution to the newsletter. For more questions you can email Sean McCoy at SEAN.MCCOY@iea.org

State CCS Regulation News and Updates

California

April 12, 2011. The Governor of California, Jerry Brown, has signed Senate Bill X1-2 into law. The Bill requires California's electric utilities to obtain 33% of their energy from renewable resources by 2020. The Bill will enact as law California's Renewable Portfolio Standard (RPS) of 30% by 2020. CCS projects are included in this Bill unlike previous RPS legislation.

http://www.wsgr.com/wsgr/Display.aspx?SectionName=publications/PDFSearch/wsgralert_CA_Adopts_Renewables_Standard.htm

Indiana

April 21, 2011. The Indiana House of Representatives approved a CO₂ pipeline Bill. The Bill extends the eminent domain power to CO₂ pipelines. The Bill will now go to the Senate.

<http://www.platts.com/RSSFeedDetailedNews/RSSFeed/Coal/6023905>

Federal CCS Regulation News and Updates

April 4, 2011. Department of Energy Carbon Capture and Sequestration Program Amendments Act of 2011 (S. 699). Sponsored by Sen. Bingaman. This bipartisan Bill authorizes the DOE to enter into cooperative agreements to provide financial and technical assistance for up to 10 large scale CCS demonstration projects from industrial sources. The Bill also addresses the long term stewardship of site post injection. Last action: May 26, 2011. The Bill was read twice before Congress and referred to the Committee on Energy and Natural Resources. The Committee was ordered to report favorably.

<http://www.govtrack.us/congress/bill.xpd?bill=s112-699>

Bill Updates

April 6, 2011. EPA Stationary Source Regulations Suspension Act (S.231) sponsored by Sen. Rockefeller. S.231 was defeated 88-12 in a US Senate floor vote. This legislation was to prevent the EPA from regulating CO₂ emissions from stationary sources under the Clean Air Act.

<http://blogs.wvgazette.com/coalatattoo/2011/04/06/sen-rockefeller-loses-again-on-epa-bill/>

April 6, 2011. Energy Tax Prevention Act of 2011 (S.482). This legislation sponsored by Rep. Upton and Sen. Inhofe would create broad regulatory exemptions for GHG emissions under the Clean Air Act. This Bill did not meet the 60-vote threshold in the Senate.

<http://www.wri.org/stories/2011/04/bills-would-limit-us-epas-clean-air-act-authorities>

April 6, 2011. 2 other Senate amendments (#236 and #277) which would have restricted the EPA's authority were also defeated in the Senate.

http://epw.senate.gov/public/index.cfm?FuseAction=Minority.Blogs&ContentRecord_id=2ccb8483-802a-23ad-4120-a1f71cb302bc

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International Regulation News

Alberta, Canada

May 5, 2011. The Alberta Government has passed legislation that allows for CO₂ to be stored underground. The Carbon Sequestration Tenure Regulation allows companies to apply for permits to evaluate potential CO₂ storage sites. The Regulation follows the same model that is used when evaluating natural gas and oil fields.

http://www.bellona.org/news/news_2011/Legislation_enables_Alberta

Germany

April 13, 2011. The German Cabinet has approved a draft law on CO₂ storage. This follows months of debate over the future of German nuclear energy. The Bill, which needs Parliamentary approval, implements a directive from the EU to allow pilot and demonstration CCS projects to go ahead prior to an assessment of CCS viability in 2017. The German Cabinet also approved a Bill to test the process of CCS, allowing for future demonstrations projects.

<http://www.google.com/hostednews/afp/article/ALeqM5ioHQrfI3kczj5xgqS2mvfQ496TiQ?docId=CNG.a8e9ed21ce85d240c51117f4a8d4b746.681>

<http://ecoseed.org/politics-article-list/article/3-politics/9481-german-cabinet-approves-carbon-capture-and-storage-bill>

EU

May 16, 2011. Seven Member States have applied for a total of thirteen CCS projects under the first call for proposals under the NER300 funding mechanism. In addition, Member States have submitted 65 renewable energy project applications. The UK has submitted the majority with 7 CCS applications. The European Investment Bank will release the names of the projects which will receive monies in February 2012. The NER300 scheme has a Euro 4.5-billion fund to support CCS and innovative renewable projects across the EU.

<http://www.carboncapturejournal.com/displaynews.php?NewsID=790>

Taiwan

March 28, 2011. Taiwan's EPA has launched a CCS alliance. The initiative aims to capping 2020 emissions at the 2005 level. The program also calls for a 0.1 MT/Yr pilot CCS program.

<http://www.taiwantoday.tw/ct.asp?xItem=158133&ctNode=445>

Publications and Releases

IEA CCS Legal and Regulatory Review

May 30, 2011. This review collates contributions by national and regional governments as well as leading organizations engaged in CCS regulatory activities. It serves as a resource for developing CCS regulatory frameworks.

http://www.iea.org/Papers/2011/ccs_legal.pdf

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CCS Project News

Plant Barry, Alabama, USA

June 13, 2011. Southern Company's 25MW CCS facility at Plant Barry, AL, began operating and capturing CO₂ for sequestration at Citronelle Oil Field. The CO₂ sequestration part of the project is a joint venture of SECARB and Denbury Resources.

http://www.elp.com/index/display/article-display.articles.electric-light-power.generation.coal.2011.06.Southern_Co_coal-fired_CCS_facility_is_capturing_carbon.html.html

Air Products, Texas, USA

May 27, 2011. Air Products signed agreements with Valero Energy Corporation and Denbury Onshore, to continue with the planned CCS project in Port Arthur, Texas. The captured CO₂ is to be used for EOR beginning in late 2012.

<http://www.airproducts.com/company/news-center/2011/0526-air-products-signs-two-agreements-for-texas-carbon-capture-and-sequestration-project.aspx>

HECA, California, USA

May 25, 2011. SCS Energy has agreed to take over the California Hydrogen power project and move it forward.

<http://hydrogenenergycalifornia.com/uncategorized/scs-energy-agrees-to-take-over-heca-and-to-move-project-forward>

TCEP, Texas, USA

June 20, 2011. TCEP has entered into a 25-year power purchase agreement with CPS Energy to buy 200MW of power from the IGCC CCS project.

<http://www.summitpower.com/in-the-news/texas-clean-energy-project-to-sell-power-to-cps-energy-in-25-year-ppa/>

Quest, Alberta, USA

June 24, 2011. Shell has signed agreements with the Governments

of Alberta and Canada to secure \$865 million funding for Quest oil sands upgrading CCS project.

<http://royaldutchshellplc.com/2011/06/25/shell-gets-876-million-for-canadian-carbon-capture-project/>

Boundary Dam, Saskatchewan, Canada

April 27, 2011. The Saskatchewan Government has approved the construction of the \$1.24 billion clean coal Boundary Dam project.

<http://www.edmontonjournal.com/technology/Saskatchewan+approves+clean+coal+electricity+project/4679940/story.html>

Buggenum, Netherlands

May 8, 2011. Vattenfall officially opened and started pre-combustion CO₂ capture from a 20MW slip stream off its Willem-Alexander power plant.

<http://www.captureready.com/EN/Channels/News/showDetail.asp?objID=2276&isNew=>

Hatfield/Don Valley, UK

May 9, 2011. UK based 2Co Energy has acquired Powerfuel and its CCS Hatfield Project. Powerfuel entered administration December 2010. 2Co Energy has renamed the project the Don Valley Power Project and applied for part of the EU's NER300 funding.

<http://www.captureready.com/EN/Channels/News/showDetail.asp?objID=2279&isNew=>

Porto Tolle, Italy

May 17, 2011. Italy's highest administrative court, Italy's Council of State, has voided an Italian Environment Ministry's 2009 approval for the €2.5-billion CCS project. The move followed complaints from environmental groups and local industry.

http://www.kleanindustries.com/s/environmental_market_industry_news.asp?ReportID=460370

Images:

Page 1: Southern Co's Plant Barry http://media.al.com/live/photo/barry-steam-plant-1e15734bbb091b75_large.jpg

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. Thank you.