UNITED STATES
Carbon Sequestration Council

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Sequestration News

The principal recent Congressional action on a climate bill has been in the Senate. The Senate draft climate bill was formally introduced as S. 1733 on September 30, 2009. Late in the day on October 23, 2009, Senator Boxer released her "Chairman's Mark" of S. 1733 with additions/revisions to the September 30th version of the Bill. The Bill is over 800 pages long. Congressional hearings are scheduled to begin this Tuesday. On October 27, the Environment and Public Works Committee will hold hearings on the S. 1733 Bill. The three-day hearing is expected to involve nine panels with over 50 witnesses.

Senate S. 1733 Climate Bill Introduced along with "Chairman's Mark"

The Senate draft climate bill, also called the Kerry-Boxer bill or the Senate cap and trade bill, was formally introduced as S. 1733 on September 30, 2009. A revised version was released this past Friday evening (October 23, 2009) in the form of Senator Boxer's "Chairman's Mark." The text of the original September 30th Bill, an overview, a section-by-section summary and additional descriptive material can be found on Senator Kerry's website at:
http://erry.senate.gov/cleanenergyjobsandamericanpower/intro.cfm.

S.1733 includes a number of provisions aimed at advancing CO_2 capture and storage (CCS) technology in order to achieve its targets for GHG emission reduction, including an EPRI-administered ten billion dollar grant program, and a much larger financial incentive program fueled by "bonus allowances." However, like H.R. 2454 (the House climate bill), the bill fails to resolve CCS issues related to legal frameworks and long-term liability, electing rather to commission reports to Congress on these barriers to CCS. One noticeable change in S.1733 is that 25% of allowances are set aside for deficit reduction, meaning that some recipients of allowances under HR 2454 will lose at least a portion of their allocations.

Senator Boxer's "Chairman's Mark" was announced in an October 23 press release which identified revision/additions to the September 30th version of S. 1733 and described its content as follows:

• Specifies distribution of emissions allowances;
• Ensures that the majority of investments in the bill are for consumer protection;
• Includes new provisions to address clean coal technology;

• Increases investments in energy efficiency and renewable energy;
• Reduces greenhouse gas emissions and increases investments in the transportation sector;
• Enhances agriculture and forestry provisions;
• Directs assistance to rural communities;
• Includes greater assistance for small and medium refineries;
• Enhances the role of tribes;
• Increases the size of the market stability reserve; and
• Promotes advanced renewable fuels.

The full press release is available on the Senate Energy and Public Works Committee website at:

http://epw.senate.gov/public/index.cfm?FuseAction=Majority.PressReleases&ContentRecord_id=84691b8e-802a-23ad-4728-e60de8d50fea

Additional information on S. 1733 is available at the following web sites:

10.23.2009 Allowance Fact Sheet S. 1733
AllowanceFactSheetS1733102393.pdf | 137.1 KBs

10.23.2009 Chairman's Mark
S1733_Chairmans_Mark_DEC09740_xml.pdf | 1.1 MBs

10.23.2009 Key Changes S. 1733 Chairman's Mark
KeyChangesS1733ChairmansMark102309.pdf | 170.5 KBs

Senators Kerry and Graham Climate Bill Approach

Senators Kerry and Graham offered a new formula for moving forward. On October 10, they coauthored a *NYTimes* op-ed calling for "a new beginning" and "genuine bipartisanship" on climate change. They characterized climate legislation as benefiting the economy, creating jobs, safeguarding national security, as well as reducing pollution. Their appeal would appear to seek to broaden support for climate legislation by expanding nuclear power incentives, making the U.S. "the Saudi Arabia of clean coal" via incentives for CCS technology, expanding offshore oil and gas exploration, considering a tax on imports from China and India if they fail to adopt green house gas (GHG) limits, and "establishment of a floor and ceiling for the cost of emission allowances" (which could be read to mean that the "soft collar" provisions in S.1733 do not meet some Senators' expectations). http://www.nytimes.com/2009/10/11/opinion/11kerrygraham.html?_r=1&sq=graham%20kerry%20climate&st=cse&adxnnl=1&scp=5&adxnnlx=1255885604-QbfyEfgEQBhk8A7cd9zL1g The text is also available at: http://kerry.senate.gov/cfm/record.cfm?id=318881

Senate Hearing on Climate Mitigation Economic Impacts

The Senate Energy and Natural Resources Committee held a hearing on October 14 on the economic impacts of climate change mitigation. An archived video of the hearing as well as written testimony by EPA, EIA, CRS, and CBO can be downloaded from the Committee's website. EPA offered few specifics, but did note that even without expanded nuclear power allowance prices would increase only 15%. EIA

was somewhat more forthcoming, noting that the allowance reserve approach to cost containment in H.R. 2454 would reduce price volatility, but could not address long-term costs, and that overall costs are generally dependent on whether improved technologies are developed and deployed. EIA also found that the transportation sector is fairly insensitive to the higher costs for petroleum resulting under H.R. 2454, with only 5-8% of total GHG reductions coming from that sector. According to EIA, "the electricity sector dominates emissions reductions." For 2030, EIA estimated that U.S. coal-fired generation would decrease from 2.3 billion KWh to 1.3 billion KWh in their best guess scenario, but could be as low as 0.3 billion KWh if international offsets are limited, and CCS technology is more costly than assumed in the baseline. A follow-up hearing on October 21 took testimony from RFF, MIT, Tufts, and the Center on Budget and Policy Priorities regarding appropriate allowance allocations.
http://energy.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=3050c928-94fb-d215-d744-8018edf5a669 and
http://energy.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=3abdbd7b-0682-273e-80a3-dfa9550c8384

EPA and CCS

On September 30, EPA announced a proposed rule to change the threshold for GHG emitters under the PSD program from 250 tons per year to 25,000 tons per year, should EPA regulate GHGs under the Clean Air Act new source review program. The rule would apply to new emitters (or major modifications of existing facilities) of all six traditional GHGs, measured as "CO_2-equivalent". The notice stated that EPA "plans to develop sector- and source-specific guidance" on making BACT determinations under the new regulatory regime. These documents will be the first indicator of how the Agency will perceive the maturity of CCS technology, and whether EPA will provide a consistent approach for technology evaluation at coal versus natural gas fired power plants. http://www.epa.gov/nsr/

The October 7 Federal Register published a "Proposed rule; reconsideration" regarding regulation of GHGs under existing Clean Air Act authority. EPA is reconsidering its December 18, 2008, determination that GHGs are not currently "subject to regulation" under the CAA – a precondition for imposition of NSR permitting requirements. The fifteen page FR notice explains the background and issues involved and requests public comment on the correct interpretation of the law by December 7.
http://www.epa.gov/nsr/fr/20091007_51535.pdf http://www.epa.gov/nsr/guidance.html .

Climate Related Litigation

On September 30, the U.S. District Court for the Northern District of California dismissed a case brought by the (Alaskan) Native Village of Kivalina against Exxon-Mobil Corporation, et al. (Case No. C 08-1138 SBA). The village had claimed that global warming had reduced the Arctic sea ice that protects the Kivalina coast from winter storms, requiring the village to relocate. The village sought compensation from 24 oil, energy, and utility companies, most of whom had no nearby operation. The defendants claimed that "the claims are not justiciable under the political question doctrine, and that the Plaintiffs otherwise lack standing under Article III of the US Constitution." The court cited legal precedent stating: "A non-justiciable political question exists when, to resolve a dispute, the court must make a policy judgment of a legislative nature, rather than resolving the dispute through legal and factual analysis." Noting that the Supreme Court had established 6 independent tests of a justiciable issue, each of which must be met, the District Court concluded that more than one had not been met. The import of this case is that it essentially states that one cannot pursue climate cases under nuisance (common) law. This is exactly the opposite of the conclusion of the US Court of Appeals for the Second Circuit in a

September 21 decision (*State of CT et al v. AEP et al.*, Docket Nos. 05-5104-cv and 05-5119-cv), reported in CB-60. If the District Court decision is appealed, it will go before the US Court of Appeals for the 9th Circuit, which has a strongly pro-environment reputation. Further complicating the picture, the US Court of Appeals for the 5th Circuit overruled a Mississippi District Court dismissal of a similar climate "nuisance" case. The 5th Circuit ruled October 16 (*Comer v. Murphy Oil, et al*., Case No. 07-60756) that plaintiffs do have standing for a justiciable lawsuit (based on "public and private nuisance, trespass, and negligence claims") charging energy companies with exacerbating the impacts of Hurricane Katrina, which damaged the plaintiffs' property. The 5th Circuit determined that the case did not present a "political question."

Recent CCS Related News

The Carbon Sequestration Leadership Forum, meeting in London last week, received a letter from DOE Secretary Chu advocating "fierce urgency" to reduce the cost of CCS technology and to make it ready for deployment within 8-10 years. http://www.netl.doe.gov/publications/press/2009/ccs_letter_s1.pdf

An October 19 story by the on-line WSJournal cited CCS as one of "Five Technologies That Could Change Everything."
http://online.wsj.com/article_email/SB20001424052748703746604574461342682276898-lMyQjAyMDA5MDIwMDEyNDAyWj.html

On October 20, the Business Roundtable issued a report, Unfinished Business, which advocates a broad range of energy solutions, including coal with CCS.
http://www.businessroundtable.org/publication/unfinished_business_missing_elements_sustainable_energy_policy

On October 2, DOE announced selection of 12 Industrial CCS projects for funding, a total of $1.4 billion of funds authorized by the Recovery Act.

On October 13, DOE announced a $55 million Funding Opportunity Notice to develop advanced CCS technologies for existing coal-fired power plants. Applications are due by December 3.
http://www.netl.doe.gov/publications/press/2009/09073-DOE_Issues_Carbon_Capture_FOA.html

On October 19, the Natural Gas Supply Association wrote to Senate Majority Leader Reid and offered several recommendations to increase the use of natural gas under pending climate legislation. Among the recommendations were suggestions to "resist efforts to allocate excessive levels of free emission allowances that subsidize high carbon emitters", "establish mechanisms to encourage power plant owners to retire their inefficient generators in the near-term", and to redefine the Renewable Electricity Standard to include natural gas generation. The letter also suggested funding for development of CCS for natural gas, although it did not suggest a performance standard approach for mandating that natural gas, like coal, actually use CCS on new units

Canada & CCS

The Canadian and Alberta governments have promised C$865 million ($823 million) to help Royal Dutch Shell carbon capture and storage at its oil sands processing plant as they seek to meet goals to cut emissions and to curb global warming.
http://www.reuters.com/article/bondsNews/idUSN0853280320091008?sp=true

TransAlta signed a letter of intent with the government of the Province of Alberta and the federal Canadian government to support a carbon-capture project. Alberta will invest C$431 million ($420 million) over 15 years to capture carbon dioxide at the company's Keephills 3 coal- fired power plant west of Edmonton. http://www.bloomberg.com/apps/news?pid=20601082&sid=aDGNAIwzUYEA

The Mantra Venture Group just signed a second Contribution Agreement with the National Research Council of Canada Industrial Research Assistance Program (NRC-IRAP) in support of Mantra's Electro-reduction of Carbon Dioxide (ERC) technology. Mantra received its first award from NRC-IRAP in April 2009 to establish the technical basis for electro-reduction of carbon dioxide to formate. http://www.prnewswire.com/news-releases/mantra-receives-second-funding-for-carbon-recycling-technology-62859017.html

Britain & CCS

London's *Guardian* reports that the EU and UK are each providing a coal-fueled 900 MW IGCC/CCS plant in Brittan with grants of 180 million pounds. The plant (Powerfuel Power) "could" be operational by 2014, and would inject captured CO_2 in an offshore natural gas reservoir. http://www.guardian.co.uk/environment/2009/oct/16/carbon-capture-storage-hatfield

The European Commission has recommended that a plant in Hatfield, near Doncaster, Yorkshire, UK, receive £164m of EU funding that would then be matched by a similar sum from the UK government. The Hatfield plant will use new CCS technology. Liberal Democrat MEP Chris Davies last year steered CCS legislation through the European Parliament http://news.bbc.co.uk/2/hi/uk_news/england/south_yorkshire/8311286.stm

Kingsnorth coal-fired power plant is still vying for funding in the British government's CCS competition, according to recent statements by the government and the company. E.ON UK announced that it expected to delay building the controversial plant for up to three years because of lower demand for electricity, which would take the plant completion date beyond the competition deadline of 2014. http://www.reuters.com/article/rbssIndustryMaterialsUtilitiesNews/idUSL824121020091008?sp=true

Finland & CCS

Finnish utility Fortum recently announced that Siemens would provide CCS technology for a test plant in Western Finland due to come online in 2015. Fortum, which would operate the plant with Finnish utility Teollisuuden Voima (TVO), said the CCS demonstration at the 565 MW coal-fired power plant in Pori will treat approximately 50% of Meri-Pori's flue gas. It said the technology would cut the plant's CO_2 emissions by some 1.25 million tons annually. http://uk.reuters.com/article/idUKLE15013520091014

South Korea & CCS

South Korea announced plans to develop technology to build a low carbon emissions thermal power plant in a bid to reduce its CO_2 emissions by 2020 according to a government announcement on October 13. (*Energy Central*, October 13)

Japan & CCS

Toshiba Corporation announced that it has completed construction of a pilot plant to support development and validation of its carbon capture technology. The unit is designed to capture 10 tons of CO_2 a day from actual flue gas from a coal power plant.. http://www.physorg.com/news173429638.html

Saudi Arabia & CCS

Saudi Arabia plans to inject CO_2 into the world's biggest oil field by 2013 to both store the CO_2 and to improve oil production, said the kingdom's assistant petroleum minister. Approximately 40 million standard cubic feet per day of CO_2 will be injected into an area already flooded by water in the Ghawar reservoir http://www.tradearabia.com/news/newsdetails.asp?Sn=OGN&artid=168749

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