



UNITED Carbon Sequestration Council STATES

February 7, 2010

Sequestration News

On February 3rd, President Obama announced a goal to build 5-10 CCS demonstration plants by 2016, and created an interagency task force to recommend federal policies to facilitate both the demos and broad deployment of CCS-equipped units within 10 years.
<http://www.energy.gov/news/8596.htm>

The Administration's FY2011 budget request was released on February 1st and Secretary Chu testified on the budget request on February 4th. The budget stated that DOE is emphasizing both commercial deployment of CCS in selected applications by 2020 and the development new highly efficient power plants by 2015.

The start of 2010 is starting out with the principal CCS regulatory news focused on current and possible future CCS related actions by EPA. The large number of climate-related and non-climate-related regulations coming out of EPA may have a very strong cumulative effect on electric utility decision making, especially with regard to existing (older/smaller) coal-based units. EPA has already issued final rules for greenhouse gas (GHG) reporting and a positive Endangerment Finding. Additional climate rules are expected in March regarding motor vehicles (which will trigger regulation of stationary sources), and Best Available Control Technology (BACT) guidance for new and modified sources. It is also worth following the balance between CO₂ requirements for new coal units and new natural gas units in upcoming BACT guidance. Congress has conveyed mixed messages, with some pushing broad Cap and Trade legislation, others seeking a scaled-back bill, and others focused on trying to block EPA's GHG regulations based on existing legislative authority. An EPA-created advisory group has issued an interim report containing recommendations for EPA regulation of power plants under pending GHG regulations.

President Obama Establishes CCS Task Force

On February 3rd, President Obama issued a memorandum (available from the White House web page) establishing an Interagency Task Force on Carbon Capture and Storage. He directed each Secretary, Administrator and Director on the distribution list to designate a senior official from each addressed agency to serve on the Task Force, which will be co-chaired by designees from the Department of Energy and the Environmental Protection Agency.

The Memorandum directs the Task Force to develop, within 180 days of the date of the memorandum, a proposed plan to overcome the barriers to the widespread, cost-effective deployment of CCS within 10 years, with a goal of bringing 5 to 10 commercial demonstration projects online by 2016. The plan is to explore incentives for commercial CCS adoption and address any financial, economic, technological, legal, institutional, social, or other barriers to deployment. The Task Force should consider how best to coordinate existing administrative authorities and programs, including those that build international collaboration on CCS, as well as identify areas where additional administrative authority may be necessary. The Co Chairs shall report progress periodically to the President through the Chair of the Council on Environmental Quality.

Administration's FY2011 CCS Budget Request Released

On February 1st, the Administration officially rolled out the President's energy budget request for 2011. The Coal/CCS portion of the budget is funded at the same bottom line level as FY10: \$404M in round numbers. However, there is no funding requested for the CCPI demonstration program (because there was already \$3.4B in ARRA or Stimulus Bill funding provided in 2011 for the CCPI and other coal programs), there is no mention of the FutureGen project and there was no appropriation or loan guarantee authority requested for coal/fossil projects. There was an \$11M decrease in the *Carbon Sequestration* budget line -- down from \$154M in FY10 to \$143M in FY11, but that decrease was offset by an increase of \$13M (for Carbon Sequestration related R&D) in the *Innovation for Existing Plants* line and an increase of \$19.9M (for related work) in the *Advanced Research* budget line. The Carbon Sequestration Regional Partnerships will remain a priority in the Carbon Sequestration Program. The *Advanced IGCC* budget line was down by \$8M and the *Fuels* line was down by \$13M. The Program Direction line was down by \$6M. DOE is emphasizing both commercial deployment of CCS in selected applications by 2020 and the development new highly efficient power plants by 2015.

GreenWire reported on February 2nd that Senator Rockefeller, during a Senate Finance Committee hearing, questioned the President's commitment to coal-based technologies. He noted verbal commitments to coal, but asked OMB Director Orszag to reconcile those statements with the FY11 budget proposal for coal, and recent actions by the EPA Administrator, which the Senator viewed as not supportive of coal. Responding to a later statement by Senator Cornyn that proposed energy policies would increase prices and oil imports and that 75% of our energy in 2035 is projected to come from fossil fuel, Director Orszag responded that the policies were intended to reduce that percentage.

Secretary Chu Testified on the FY2011 CCS Budget Request

Secretary Chu testified on February 4th before the Senate Energy and Natural Resources Committee. His testimony, more than that of previous Secretaries, emphasized the Department's commitment to CCS. His written testimony highlighted CCS and essentially referred to the entire coal budget as being CCS (which it essentially is -- the power generation R&D is integrated with CCS). His written testimony states, *The Department is committed to advancing Carbon Capture and Storage (CCS) technologies in order to promote a cleaner and more efficient use of fossil fuels. In addition to significant Recovery Act funds, advanced CCS with \$438 million requested in FY 2011 is the foundation of the Department's clean coal research program which seeks to establish the capability of producing electricity from coal with near-zero atmospheric emissions.*

President Obama Establishes CCS Task Force

On February 3rd, President Obama issued a memorandum (available from the White House web page) establishing an Interagency Task Force on Carbon Capture and Storage. He directed each Secretary, Administrator and Director on the distribution list to designate a senior official from each addressed agency to serve on the Task Force, which will be co-chaired by designees from the Department of Energy and the Environmental Protection Agency.

The Memorandum directs the Task Force to develop, within 180 days of the date of the memorandum, a proposed plan to overcome the barriers to the widespread, cost-effective deployment of CCS within 10 years, with a goal of bringing 5 to 10 commercial demonstration projects online by 2016. The plan is to explore incentives for commercial CCS adoption and address any financial, economic, technological, legal, institutional, social, or other barriers to deployment. The Task Force should consider how best to coordinate existing administrative authorities and programs, including those that build international collaboration on CCS, as well as identify areas where additional administrative authority may be necessary. The Co Chairs shall report progress periodically to the President through the Chair of the Council on Environmental Quality.

EPA and CCS

The combination of the current recession, back-to-back trillion dollar deficits, and election year politics makes it appear unlikely that comprehensive climate change legislation will be embraced by the current Congress. More likely to happen are: (1) More economic stimulus, in the form of a jobs bill which could include energy incentives, and (2) A relatively small-scale energy bill, probably targeting an expanded renewable electricity standard, but perhaps extending to other low/no carbon technologies, like nuclear power and Carbon Capture and Storage (CCS). Nevertheless, the pressure of EPA regulation of GHGs, likely to begin in March, could change things.

On December 7th, EPA's Administrator signed the Endangerment Finding rule, declaring that 6 GHGs are a threat to public health and welfare. The ruling also found that the 6 gases as emitted from motor vehicles "cause or contribute" to this threat. The latter finding is an essential requirement to enable EPA to regulate CO₂ from motor vehicles, as proposed in 2009.

<http://www.epa.gov/climatechange/endangerment.html>

On December 15th, EPA reinforced the message in its February 2009 Environmental Appeals Board reversal of a permit for a coal-based CFB because it did not consider burning natural gas, with a reversal of KY's permit for the Cash Creek IGCC, because it did not evaluate running on natural gas.

<http://www.lawandenvironment.com/uploads/file/Cash%20Creek%20Title%20V%20decision.pdf>

In October 2009, EPA formed a workgroup under the Clean Air Act Advisory Committee, "to discuss and identify the major issues and potential barriers to implementing the Prevention of Significant Deterioration program under the Clean Air Act for greenhouse gases."

<http://www.epa.gov/air/caaac/climatechangewg.html> On January, 25th, the workgroup produced a 28page interim report presenting their findings to date. Issues addressed included:

- At what point do potentially available control options [like switching fuels] "redefine a source"? [This is important because EPA policy is that their authority does not allow the process of establishing best technology for a new or modified source to redefine the source being proposed.]

- What determines CCS technical feasibility? [Only feasible technologies need be considered in the permitting process.]
- How should energy efficiency be incorporated into BACT determinations?

The EPA FY2011 budget request, released this past week, demonstrates the Administration's seriousness regarding climate change regulations. The EPA budget includes \$43 million in new funding for such regulatory initiatives. \$20.8 million is requested for the GHG reporting rule, \$5 million for permitting guidance; \$6 million for implementing the new vehicle regulations; \$7.5 million for GHG new source performance standards; \$7.1 million for CCS rules. <http://www.epa.gov/ocfo/budget/>

Duke Energy and EPA announced a consent decree that would resolve NSR issues for the company's Indiana plants by, among other things, committing the utility to either shutting down two large coal-fired units, or converting them to natural gas.

<http://www.epa.gov/compliance/resources/cases/civil/caa/dukeenergy-infosht.html>

The January 6th *Federal Register* included an Advance Notice of Proposed Rulemaking to identify classes of facilities for which the Agency would develop Financial Responsibility Requirements under CERCLA (Superfund). The categories include "Petroleum and Coal Products Manufacturing" and "Electric Power Generation". The first category would include CTL and CT-SNG facilities. These rules would apply to any storage or disposal of hazardous materials from these facilities. 75FR816, January 6, 2010. See also, <http://www.epa.gov/superfund/policy/financialresponsibility/index.html>

EPA's semiannual *Regulatory Agenda* publication, referenced in the December 7th *Federal Register*, outlines a host of new regulations which are likely to impose new requirements on coal. The most significant of these are the Light Duty vehicle CO₂ regulation, which will trigger regulation of new or modified stationary sources of CO₂ using existing Clean Air Act authority, and the EPA "tailoring" rule, which will attempt to increase the emission rates that constitute an obligation to obtain PSD permits for new or modified sources of CO₂. A number of other items are also in play, including BACT guidance for implementing those newly required permits and an underground injection control (UIC) rule for CCS.

On January 29th, EPA responded to Senator Voinovich's request for analysis of additional scenarios of possible paths for HR 2454, the House-passed Cap and Trade climate bill, with results for 12 more "runs". The scenarios provided by EPA in July 2009 projected allowance prices of \$26-31 per ton of CO₂ in 2030, with the exception of the "no international offset" scenario, which boosted costs by 89%. The new modeling shows prices about 23% higher, due primarily to an assumption that other nations will demand more international offsets than assumed in July, driving up their cost to the U.S. As before, if international offsets are unavailable, costs go up significantly (58-148%, depending on one's choice of models). Results, documentation, and more are available at:

<http://www.epa.gov/climatechange/economics/economicanalyses.html> .

Representatives Skelton, Emerson, and Peterson introduced a bill February 2nd to block EPA regulation of climate change under current legislative authority. Representative Pomeroy introduced HR4396 on January 8th to do the same thing. Senator Murkowski has indicated that she will offer in March a resolution to disapprove the EPA Endangerment Finding, which could have a similar impact to the house legislation, if passed by both houses and signed by the President.

A January 27th *NYTimes* article reported efforts by Senator Graham (R-SC) to work with democrats to fashion a small-scale climate bill with incentives for nuclear, coal-CCS, and perhaps offshore gas production. A regulatory program aimed at coal-fired power plants, coupled with the about-to-be promulgated Light Duty Vehicle rule and incentives for agricultural/forestry offset projects would appear

to have about the same effect over the next twenty years as a bill like HR2454, and without the complexity and political overhead of the broader legislation.

More on Copenhagen

The December Copenhagen meeting produced an agreement, the Copenhagen Accord, in which signatory nations agree to seek to limit global temperature increase to 2 degrees Celsius and for developed countries to provide \$30 billion to developing nations for adaptation and mitigation. A number of countries have since submitted statements of intent to reduce emissions by specified amounts by a date certain. Some, like the US offer a percentage reduction compared to historic emissions (the US commitment of 17% below 2005 levels by 2020 is consistent with HR2454). Others, like China, offer a percentage reduction in carbon intensity (emissions per unit of GDP).
<http://unfccc.int/home/items/5264.php> & <http://unfccc.int/home/items/5265.php>

The SEC and CCS

On February 2nd, the SEC posted guidance for corporations to follow in reporting financial risk related to climate change. The 29 page document includes a dissertation on the background of such risk analysis, citing numerous reports and legal actions that pertain to the risk (78 footnotes). The guidance also noted that the SEC's Investor Advisory Committee "is considering climate change disclosure issues as part of its overall mandate to provide advice and recommendations to the Commission." The action was filed as an "Interpretation" of existing rules, which appears to have the effect of a direct promulgation without going through the process of proposal and receipt of public comment.
<http://www.sec.gov/rules/interp.shtml>

EU and CCS

On February 2nd, the EU agreed to sell 300 million carbon permits (allowances) to finance "up to a dozen CCS demonstration units by 2015. At current allowance prices, that adds up to about \$5.3 billion, but if allowances increase in value as expected, the total could be \$14 billion. The European Commission and the European Investment Bank will select which projects are awarded the incentives.
http://www.ft.com/cms/s/0/e5ead58a-10f6-11df-9a9e-00144feab49a.html?nclick_check=1

A new website in the UK has been launched to address legal and regulatory issues related to CCS technology. <http://www.ucl.ac.uk/cclp/>

Bloomberg (January 22nd) reports that RWE may have to move a proposed coal-CCS demonstration project from Germany to the Netherlands because of German public opposition to CCS.
<http://www.bloomberg.com/apps/news?pid=20601100&sid=aOZGhPaq04MY>

Other CCS News

The NYTimes (February 4th) reported that California granted Calpine Corp. a 600 MW natural gas power plant an air permit including a limit on CO₂ emissions. The limit appears to be a requirement that the plant be operated as designed (efficiently) and not a requirement to add carbon capture technology. Nevertheless, the unit may be the first in the nation with an explicit regulatory limit on CO₂ emissions.

A CO₂ pipeline eminent domain bill passed the Indiana Senate on January 28th. The bill is reportedly designed to help the proposed Indiana Gasification LLC facility move its CO₂ to a interstate system terminating at Texas EOR sites. <http://www.chicagotribune.com/news/chi-ap-in-carbondioxidepipe,0,4053165.story>

A political blog reports that the *Journal of the American Medical Association* will publish an article identifying “important and unanswered” questions regarding health risks of CCS. It isn’t clear what risks are being cited, but the blog suggests that the issue in focus is asphyxiation from large scale releases. <http://thehill.com/blogs/e2-wire/677-e2-wire/74403-capitol-hill-loves-carbon-storage-technology-but-are-lawmakers-overlooking-risks>



The U.S. Carbon Sequestration Council (www.uscsc.org) is a not-for-profit, 501(c)(3), organization established as an authoritative source of information to inform and to educate on all matters pertaining to carbon sequestration.