A number of energy technology projects have been making news the past few weeks owing to their pioneering efforts to deploy CCS technologies. These projects were cited in EPA’s recently proposed New Source Performance Standards regulation as examples of facilities equipped with CCS technology.

As cited in the EPA regulation:

“The EPA notes that, since the original April 2012 proposal, a few coal-fired units have reached the advanced stages of construction and development, which suggests that proposing a separate standard for coal-fired units is appropriate. Since the original proposal, progress on Southern Company’s Kemper County Energy Facility, an IGCC facility that will implement partial CCS, has continued, and the project is now over 75% complete. Similarly, SaskPower’s Boundary Dam CCS Project in Estevan, Saskatchewan, a project that will fully integrate the rebuilt 110 MW coal-fired Unit #3 with available CCS technology to capture 90% of its CO2 emissions, is more than 75% complete.”

“Additionally, two other IGCC projects, Summit Power’s Texas Clean Energy Project (TCEP) and the Hydrogen Energy California Project (HECA) – both of which are IGCC units with CCS – continue to move forward. Further, NRG Energy is developing a commercial-scale post-combustion carbon capture project at the company’s W.A. Parish generating station southwest of Houston, Texas.”

EPA also acknowledges the partial capture CCS efforts at the Great Plains Synfuels Facility (Basin Electric Power Coop) in North Dakota and at American Electric Power’s (AEP) Mountaineer plant in West Virginia.

Other “CCS ready” pioneering projects noted in the proposed regulation include AEP’s ultra-supercritical John W. Turk Plant in Arkansas and Duke Energy’s Edwardsport IGCC facility in Indiana.

These projects share a number of characteristics. Most are still under development and not operating on a commercial scale. They’ve all received some form of financial assistance from the government. Many have encountered opposition to their development on environmental permitting grounds.

Great discoveries and improvements invariably involve the cooperation of many minds. I may be given credit for having blazed the trail, but when I look at the subsequent developments I feel the credit is due to others rather than to myself.

Alexander Graham Bell

In the coming months, possibly years, that the debate on the EPA NSPS regulation is waged, we’re likely to hear a lot more about these pioneering efforts. It’s likely that not all the comments will be favorable. Certainly, more time is needed to assess these plants in terms of their operational and economic value.

What we should not forget during the course of this discussion is that in a time of economic and political uncertainty, a few pioneering companies stepped up to the plate envisioning a future that was worth braving a few arrows in the back. Regardless of how these projects are ultimately assessed, we can be sure that their initiatives to make use of our nation’s vast domestic coal resources will contribute greatly to our understanding and efforts to advance clean, affordable energy for U.S. and global citizens.

Cheers to the pioneers.
NCC FALL MEETING 2013

We’re all set! Well, almost all. We have a great line up of speakers for our annual fall Full Council Meeting on Friday, November 1st, 2013 in Washington, DC.

Robert Bryce, Senior Fellow, Manhattan Institute
Global Energy Trends:
How Electric Demand is Driving Coal Demand

Thomas Alley, Vice President Generation, EPRI
The Power System of the Future:
Flexible Supply & Generation

Divya Reddy, Analyst
Global Energy & Natural Resources, Eurasia Group
Europe’s Experience Implementing CO2 Emissions Mandates: Lessons Learned

A reception is planned for Thursday evening, October 31st, 6-8 pm and the Full Council Meeting is set for November 1st, 9 am-Noon. The meeting and reception will be hosted at the Washington Court Hotel, located at 525 New Jersey Avenue, N.W., Washington, D.C.

It’s not too late to register to attend and to secure a hotel room at our group rate. Deadline for hotel reservations is Friday, October 11th so don’t dawdle. The hotel group rate is $239 per night for standard rooms. For reservations, please call 1-800-321-3010 or go to the hotel web link at Washington Court Hotel. Please be sure to mention the NCC when booking your reservation.

Thank You Thank You

A number of folks have stepped up to the plate to sponsor our event. Thanks for your support!

Reception Sponsor ~ Arch Coal
Breakfast Sponsor ~ Joy Global
Break Sponsors ~ CSX Transportation, PPL EnergyPlus, ENN Energy
Supporting Sponsors ~ Tri-State Generation & WorleyParsons

We’d welcome support from a few more folks. If you’re interest in sponsoring please let me know ~ Janet Gellici 202-223-1191 or jgellici@NCC1.org.

Reception Sponsor ~ $5,000
Buffet Lunch Sponsor ~ $2,500
Break Sponsor ~ $1,000
Other ~ Name Your Level of Support

I’d also like to thank the following folks for their support on the NCC 2013 Fall Meeting Program Development Committee:

Sy Ali, Principal, Clean Energy Consulting
Debra L. Schumacher, President, Women in Mining
Kathy Walker, President, Elm Street Resources Inc.

Looking forward to seeing you all in DC later this month!

WHO KNEW?

What the Coal Industry is Doing to Support Clean Coal Technology RD&D

I attended a meeting in September at The Atlantic Council on the topic of Advanced Fossil Energy Technologies: Key Issues in Ensuring Access to Energy, Protecting Energy Security & Enhancing Environmental Performance. Quite a lot to cover in a half-day program. Kudos to the folks at The Atlantic Council, and co-hosts Global CCS Institute for a fine-tuned, presentation-packed program.

During the event, an audience participant chided the coal supply industry for what he perceived to be an absence of support for coal technology RD&D. Of course, there’s always “more more more” that can and should be done, but the coal industry is actively engaged in technology RD&D in various ways, many of which are often unheralded. The Consortium for Clean Coal Utilization at Washington University in St. Louis is one such example.

In September, I had the pleasure of visiting CCCU which is dedicated to addressing the scientific and technological challenges associated with using coal in a clean and sustainable manner. The Consortium’s mission is to be a resource for industry for the advancement of technologies that foster clean utilization of coal by creating an international partnership between universities, industries, foundations and government organizations. CCCU has partnered with over a dozen universities worldwide in recognition that climate change is a global concern and that the strength of the international research community will be needed to address the challenge.

Lead sponsors and financial supporters of the CCCU include Peabody Energy, Arch Coal and Ameren Energy. Research areas include those devoted to CO2 capture, geological sequestration and mercury control. The Consortium’s on-site campus Advanced Coal and Energy Research (ACER) Facility is a greenfield, pilot-scale (1 MW thermal) plant used to test new technologies for large-scale combustion applications, including oxy-coal combustion, biomass co-firing, fly ash utilization and algae production.

This is just one of many efforts being undertaken by the coal industry in support of clean technology developments. We’ll feature others in coming issues.

http://cccu.wustl.edu/

For more info contact Ben Kumter, Manager of ACER
Washington University, 314-935-6319, cccu@wustl.edu
On September 20, 2013, the Environmental Protection Agency released a proposed rule setting “Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units.” It set CO2 emissions limits for coal and IGCC units at 1,100 lb CO2/MWh and for natural gas combustion turbines at 1,000-1,100 lb CO2/MWh.

Numerous industry groups and analysts have provided detailed assessments of the particulars of the proposed regulation, focused primarily on issues associated with the loss of the option to build new coal plants, the feasibility vs. commercial viability of the Best System of Emissions Reduction (BSER), the status of CCS technology development, and economic and environmental impacts. Many analysts have suggested that the new regulation will preclude the building of new coal plants. In its past studies, the NCC has emphasized the value of building new, efficient coal power plants as part of a broad-based plan to reduce GHG emissions.

In its May 2008 report for then Secretary of Energy Samuel Bodman, the NCC detailed a “systematic technological and regulatory pathway to cleanly and efficiently realize the full potential of our domestic coal resources” and highlighting a multi-step process to near-zero emissions referenced in a version of the above-noted graphic. That plan included building new, efficient supercritical and IGCC coal plants.

The NCC recommended that new supercritical plants be built with “the highest economically justifiable efficiency both for their period of operation without CCS, and also to be able to carry the burden of efficiency reduction when equipped with CO2 capture in the future.” NCC further advanced recommendations for increasing the availability of IGCC technology as well as advanced turbine programs to enhance efficiency, including oxyfuel turbines. Included among the recommendations regarding new coal plants was advancement in new corrosion-resistant, high-temperature nickel alloys for use in boiler and steam turbines to achieve higher steam temperatures and higher efficiency.

In a concluding recommendation, the NCC report notes that “The best strategy for meeting future electricity needs while addressing climate change concerns and minimizing economic disruption lies in developing a full portfolio of technologies from which power producers can choose the option best suited to local conditions and preferences and still provide power at the lowest cost to the customer.”

These recommendations continue to provide valuable contributions to the current dialogue on New Source Performance Standards.
NCC Member Focus

One of the reasons we’re delighted to have Jeff Wallace in a leadership position at NCC is due to Southern Company’s significant commitment to coal generation and the advancement of clean coal generation technologies. The company’s Kemper County Energy Facility exemplifies that commitment.

Kemper County is a lignite-fueled integrated gasification combined cycle (IGCC) facility being constructed in Kemper County, Mississippi by SoCo’s Mississippi Power subsidiary. IGCC converts lignite to gas using the air-blown Transport Integrated Gasification (TRIG™) technology jointly developed by Southern Company, KBR and the U.S. Department of Energy at the Power Systems Development Facility in Wilsonville, Alabama. The project is being developed through a cooperative agreement with SoCo and DOE under the Clean Coal Power Initiative (CCPI) Round 2 Program.

The state-of-the-art facility, which is expected to come online in 2014, will make use of Mississippi’s 4 billion ton indigenous reserves of lignite coal, much of which will be sourced from the Liberty Mine (North American Coal Corporation). Kemper will use about 375,000 tons of local lignite per month or almost 150 million tons over the expected 40-year life of the plant.

Kemper will have an estimated nameplate capacity of 830 MW with a peak net output capacity of 582 MW and a heat rate of 11,700 Btu/kWh. Over 65% of the CO2 emitted at the plant will be captured. The approximately 3 million tons of CO2/year captured at the plant will be used for Enhanced Oil Recovery (EOR). In addition, the plant will annually produce marketable by-products such as ~135,000 tpy of sulfuric acid and ~20,000 tpy of ammonia.

Kemper County will use treated effluent from the nearby city of Meridian as cooling/makeup water.

You can access some up-to-date video clips detailing progress of the facility here Kemper County Energy Facility. Aren’t all those building cranes a beautiful sight?
COAL CURRENTS
Todd Cunningham, Contributing Editor

Claire CHANGE
Administration Unveils Proposed Emissions Standards for New Power Plants
The Environmental Protection Agency (EPA) has unveiled the Administration’s proposal to limit the carbon dioxide emissions of new coal- and gas-fired power plants built in the U.S. Under the proposal, new coal-fueled units would need to meet an emissions limit of 1,000 pounds of carbon dioxide per megawatt-hour. This is likely possible only if they can capture 20% to 40% of the carbon produced and sequester it or use it in other applications such as enhanced oil recovery (EOR). EPA Administrator Gina McCarthy characterized the proposal as one that sets out “a certain pathway forward for coal to continue to be part of a diverse mix in this country,” and insisted that carbon capture and sequestration “is a technology that is feasible, and it’s available today.” However, the initiative received heavy criticism from Capitol Hill and industry. In the latter sector, National Mining Association (NMA) President Hal Quinn denounced it as “effectively banning coal from America’s power portfolio.” Power plants now in operation are not affected by the proposed rule; EPA is to unveil proposed standards for these plants by June 1, 2014.

Global Warming Slows but Human Impact on Warming Said “Extremely Likely”
Scientists can now say it is “extremely likely” that human activity is the leading cause of global warming seen since the 1950s, the Intergovernmental Panel on Climate Change (IPCC) said in a new report. It found that global warming has slowed since 1998, increasing at less than half the rate of longer-term averages since 1951, but indicated that sea levels are expected to rise more quickly than previously forecast. The drafting group’s co-chairman said that continued emissions of greenhouse gases would cause further warming and changes in the climate system, Bloomberg reported. Accordingly, he said, limiting warming “will require substantial and sustained reductions” of such emissions. The IPCC document is intended to guide the work of delegates from almost 200 almost 200 nations working on a treaty to restrict fossil fuel emissions.

“This weakens the argument for widespread alarmism over global warming,” Bjorn Lomborg, a Danish scientist and author of “The Skeptical Environmentalist,” wrote by e-mail. “The report contains none of the media’s typically apocalyptic scenarios, no alarmism, and no demands to cut emissions by X-percent or to hand out lavish subsidies on solar panels.”

State Department Reports U.S. Progress on Emissions Cuts
The U.S. is making progress on reducing its greenhouse gas emissions, the State Department said, but still has “more work to do.” According to USA Today, in its 2014 Climate Action Report to the United Nations, the Department indicated that average U.S. emissions were lower from 2009 through 2011 than in any three-year period since 1994-1996 and are on track to meet President Obama’s goal of reducing them by 17% below 2005 levels by 2020. But it said additional steps, such as cutting power plant emissions, implementing new efficiency standards, as well as policies to boost solar and wind development, were needed, because based on measures in place as of September 2012, emissions would fall only 4.6% below 2005 levels in 2020.

USGS Creating Registry of Climate Vulnerability Assessments
The U.S. Geological Survey (USGS) is going to create a registry of the vulnerability of various resources and societal assets to climate change, the Interior Department unit announced in a Federal Register notice. The information to be collected includes, but is not limited to, the assessments’ topical focus, methodology and supporting data. “Because many governmental and non-governmental parties are conducting such assessments, and because their conclusions, methodologies and related data assets may be of interest … the USGS will make the information collected available on the Web in the form of a simple registry-type database,” it reported. The agency is soliciting comments on matters such as how to enhance the quality, usefulness and clarity of the information to be collected. It pointed out that all comments received are a matter of public record.
Coal Currents (continued)

ENVIRONMENTAL REGULATION

EPA Chief Warns of Threat from Budget Impasse

If Congress fails to pass a measure allowing continued funding of federal government operations, the Environmental Protection Agency (EPA) would effectively shut down, Administrator Gina McCarthy warned. While she would remain on the job, along with a small group of officials “to keep the lights on and respond in the event of a significant emergency,” McCarthy told an event sponsored by The Christian Science Monitor, “The vast majority of people at EPA will not be working.” According to the newsletter The Hill, regulatory actions such as the recently proposed limits on carbon emissions from power plants could be affected by a shutdown. However, McCarthy reported, the agency developed contingency plans the last time a shutdown was threatened, in 2011, and has “jumpstarted a re-look at those.”

Green Groups Seek SCOTUS Action on Cross-State Pollution Rule

Environmental groups, warning that a federal appeals court’s nullification of EPA’s 2011 Cross-State Air Pollution Rule (CSAPR) would prevent regulators from addressing power plant emissions that cross state lines, are asking the U.S. Supreme Court to get involved. According to The Hill, the green groups — the Environmental Defense Fund, the American Lung Association and others — filed a brief with the high court seeking revival of the rule. The appeals court’s majority revisions of the statute “would thwart timely attainment of the nation’s health-based air quality standards,” the newsletter’s E2 Wire energy and environmental blog reported. EPA’s rule would mandate cuts in smog- and soot-forming power plant emissions in more than two dozen states in the eastern U.S., the publication specified.

Critics of Revised Social Cost of Carbon Pressing Case

Critics of the Obama Administration’s hike in the estimated social cost of carbon (SCC) have found additional arenas in which to seek more transparency — and for ending use of the metric for now. The controversial measure is an estimate of the monetary damages caused by carbon pollution, such as changes in agricultural productivity and human health effects, The Hill’s E2 Wire reported. Opposition has included urging by the National Federation of Independent Businesses that the Department of Energy grant a conservative legal group’s petition for redoing an efficiency rule that first used the higher SCC estimate, and a letter from “an array of major business groups” to the White House Office of Management and Budget urging withdrawal of the estimate. The revised SCC estimate has also been targeted on Capitol Hill.

ON CAPITOL HILL

White House’s Nominee Ends Quest to Chair FERC

The President’s nominee to chair the Federal Energy Regulatory Commission (FERC), who has been mired in a protracted Senate confirmation process, has withdrawn from consideration for the post. Ron Binz, a former Colorado Public Utilities Commission chair, issued a statement in which he acknowledged that his nomination was not likely to be reported favorably by the apparently deadlocked Senate Committee on Energy and Natural Resources. Binz protested that while he has drawn heavy criticism for what some opponents condemned as an outright hostility to coal — The Wall Street Journal branded him a radical — this was a caricature. The confirmation battle had devolved into a “blood sport,” he told the Washington publication POLIIICO. Energy Committee Chairman Ron Wyden (D-OR), who had tried to address concerns over Binz’s stance on coal during the hearing process by emphasizing that FERC has no authority to regulate the fuel, said it was unfortunate that the “well-qualified” candidate had been forced to withdraw.

State AGs Say EPA Overreached on Emissions Regs

In drafting its proposed regulations for existing coal-fired power plants, the Administration “continue[d] to unilaterally bypass the role of the states,” according to Rep. Ed Whitfield (R-KY), chairman of the House Energy and Commerce Subcommittee on Energy and Power. Whitfield made his comment as he released a white paper report by 17 state attorneys general and one senior environmental regulator. The paper, sent to EPA Administrator Gina McCarthy, pointed out that the agency’s authority under the Clean Air Act is limited to developing a procedure for states to establish emissions standards for existing sources such as existing coal-fired power plants. The state officials proceeded to express concern over the impact that overreaching emissions standards on existing plants “will have on the economy.
Emissions Rule Has Implications for 2014: U.S. News

To find a “big story with serious 2014 election implications that’s flying under the radar in Washington,” U.S. News & World Report suggests looking at EPA’s proposed rule to dramatically limit emissions by U.S. power plants. The rule’s economic impacts, including job losses, will put Democrats running for election across the country on the defensive, the magazine reported. It cited Senate races in Kentucky, West Virginia and Louisiana as examples of where Democratic candidates are running from President Obama and, in some cases, the “anti-coal Senate leader,” Harry Reid of Nevada. “Even worse for Democrats in 2014, this represents just the tip of the iceberg,” U.S. News went on, pointing to controversies over years of delays in permitting of the Keystone XL pipeline.

New Group Aims to Represent Pro-Coal Democrats

Several current and former members of the House of Representatives, along with former staff members who now work as lobbyists, have launched a new group, the CoalBlue Project, to represent pro-coal Democrats. According to the Huffington Post, the group is promoting itself as “Democrats committed to securing coal’s place in America’s sustainable energy future.” The group, which also includes current and former state elected officials, plans to work with congressional, state and local elected officials, said its secretary, Stefan Bailey. Its objective is to “identify, organize, educate and mobilize Americans” in support of coal, he added. CoalBlue includes current House members Nick Rahall (D-WV) and Bill Enyart (D-IL), and former Reps. Rick Boucher (D-VA) and Tim Holden (D-PA). http://coalblue.org

INDUSTRY INTEREST

Use of Gas for Electricity Generation Falls as Prices Rise

The rising price of natural gas relative to coal is creating a drag on the former’s attractiveness for power generation, the Energy Information Administration (EIA) reported. According to FuelFix, the Energy Department statistical unit said that the use of gas for electricity generation fell by 14 percent during the first seven months of 2013, compared with the same time period for 2012. However, even with the price increase—up from a low of $2.39 per million Btu in 2012 to about $3.50 today—gas-fueled generation remains higher than before 2012, “indicating a longer term, gradual shift away from coal.” Coal now accounts for 39% of the fuel used for power generation, down from 42% in 2011.

EIA Asked to Reconsider Basis for Renewable Energy Forecasts

Almost 100 organizations have joined to request that EIA reconsider the assumptions and methodology underlying its estimates of the outlook for future electrical generation from renewable resources to be set out in its Annual Energy Outlook 2014. According to Platts, the organizations’ joint letter to EIA Director Adam Sieminski contended that past estimates in this area “have been unreasonably low and have not been borne out by actual experience.” Because policy makers, public and private sector alike, rely heavily on EIA data in making legislative, regulatory, investment, and other decisions, the groups said, “we believe that underestimation can have multiple adverse impacts on the renewable energy industry and, more broadly, on the nation’s environmental and energy future.

DUTY NOTED

Students Seek Divestiture of Fossil Fuel Stocks

A movement by college students to encourage their schools to divest their endowments of holdings of companies in the fossil fuel sector has gathered momentum at more than 300 campuses over the last year, The New York Times reported. The efforts have gained some traction, The Times said, but also have met with strong opposition from critics who favor institutional investors’ traditional method of engagement; trying to prod corporations to change their practices. Officials at Harvard University, which has a $31 billion endowment, the nation’s largest, is in this camp, with a spokesman telling The Times that the school “has traditionally maintained a strong presumption against divesting stock for reasons unrelated to investment purposes.” The divestiture movement echoes earlier efforts by endowments and pension funds to sell stocks of companies doing business with South Africa and of tobacco companies.