NCC APPROVES STUDY ON EXISTING COAL FLEET
MAY 13-14, WASHINGTON, DC

Members of the National Coal Council, meeting at the organization’s annual spring event in Washington, DC on May 14th, approved a study entitled “Reliable & Resilient: The Value of Our Existing Coal Fleet.” The study was conducted in response to Secretary Moniz’s request to provide an assessment of what industry and the Department of Energy could do to enhance the capacity, efficiency and emissions profile of the existing coal generation fleet in the U.S., through the application of new and advanced technology. The Secretary also requested that NCC addressees the job implications of modification and addition of equipment at existing coal plants.

The NCC study was conducted during the winter of 2013-2014. The severe cold weather events experienced while the study was underway, reinforced the importance of retaining and maintaining existing coal generation assets in order to reliably and affordably meet the electricity needs of U.S. residents and businesses.

NCC’s assessment of the existing U.S. coal fleet supports the findings that:

• The current 310 GW fleet of coal-fired power plants underpins economic prosperity in the U.S., providing direct economic and macroeconomic benefits; energy supply and price stability; environmental benefits through continuous technology advancements and job-creating opportunities.

After the approved study, the following findings were articulated:

• Coal plant closures and increasing reliance on natural gas for power generation will adversely impact price stability and resource supply.

• New Source Review (NSR) regulations adversely impact generators’ decisions and ability to enhance plant efficiency, reduce emissions and improve overall operations and capacity.

• Collaborative RD&D efforts (DOE and industry) can enhance the ability of the coal fleet to improve its flexibility and reliability, to increase its efficiency and to reduce its emissions profile.

“The NCC study identifies policies, technologies and practices that can be employed to make use of our current coal generation assets in a cost-effective way that benefits U.S. citizens and businesses, in an environmentally sound manner.”

John Eaves, NCC Chair

Modest improvements in efficiency technologies are possible with existing technologies to improve heat transfer, reduce heat losses and make better use of low quality heat. More advanced improvements, if technically and commercially viable, could significantly enhance efficiency.

The need for RD&D is vital to support marketplace shifts and public policy objectives.

> Increasing deployment of intermittent renewable energy technologies, competition from other fossil fuels, use of non-design coals and continued use of older coal generation technologies will lead to increased operation of baseload units in a cycling mode for which they were not designed.

NCC LEADERSHIP

Jeff Wallace, NCC Chair
Vice President, Southern Co
Mike Durham, NCC Vice Chair
President & CEO
Advanced Emissions Solutions
Fred Palmer, Coal Policy Chair
Senior VP, Peabody Energy
Bill Brownell, Esquire
Vice Chair Coal Policy Chair, Hunton & Williams
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NCC Report on Existing Coal Fleet (continued)

> Challenges arise in complying with emerging regulations for control of traditional pollutants when new control regimes create secondary, follow-on emissions issues.

> Existing coal plants were not designed or located with CCS in mind: the ability to retrofit these plants for CCS is problematic. More research is needed to commercialize CCS retrofit potential; improved efficiencies provide an interim path in the meantime.

The NCC study includes an Executive Summary that highlights key findings and recommendations offered to DOE and Secretary Moniz. A “bonus section” provides an assessment of the 2014 Polar Vortex. The report covers:

1. The Role & Benefits of the Existing Coal Fleet
   > Profile of the Existing Coal Fleet
   > Direct & Macroeconomic Benefits
   > Supply & Price Stability Benefits
   > Environmental Benefits
   > Clean Coal Technology Job Benefits

2. Changes that Could Impact Future Benefits from the Existing Coal Fleet
   > Reduced Demand for Electricity
   > More Advantageous Natural Gas Prices
   > Environmental Regulation
   > New Source Review Regulations
   > Age of the Fleet
   > Reduced Funds for RD&D

3. Technology Responses to Maximize Future Benefits to Society
   > A Path to Improve the Flexibility & Maintain the Reliability of the Existing Fleet
   > Improving the Efficiency of Power Generation from the Existing Coal Fleet
   > Emission Reductions from the Existing Fleet
     - Conventional Pollutants
     - Retrofitting CCS on Existing Fleet

A Fact Sheet summarizing the study is available by contacting the NCC office at info@NCC1.org. The full version of the NCC report can be accessed on the NCC site at NCC’s The Value of Our Existing Coal Fleet.

SECRETARY MONIZ REQUESTS NEW STUDY FROM NCC

A day after NCC members approved the Existing Coal Fleet study, Secretary Moniz sent a request that the National Coal Council conduct a new study to assess the value of the Department of Energy’s Carbon Sequestration Program. The Secretary’s May 15th letter notes that:

“The capture of carbon dioxide (CO₂) emissions from the combustion of fossil fuels used in electrical power generation is critical to the future of fossil fuels, particularly coal, used in this country.

“The assessment would address the following question: What is the industry’s assessment of the progress made by the DOE and others regarding cost, safety, and technical operation of CCS/CCUS? In other words, how does industry see and accept major technical findings from the CCS/CCUS community, and how do those relate to DOE programs and investments.

“In order to meet U.S. economic, energy and environmental goals, power generators are being called upon to enhance the environmental performance of fossil fueled plants. For coal, that enhanced environmental performance requires the application of CCS/CCUS technology. Therefore, an assessment based on technical soundness and results to date would provide a welcome perspective from leading companies with experience in CCS/CCUS technology.”

The study will be chaired by new NCC member Amy Ericson, U.S. Country President, ALSTOM Inc. If you are interested in participating in the study, please contact Janet Gellici at 202-223-1191 or jgellici@NCC1.org.
NCC LEADERSHIP CHANGE

At its May 14th, 2014 meeting, members of the National Coal Council approved the appointed of a new NCC Chair and Vice Chair and acknowledged the significant contributions of our exiting NCC Chair.

Thank You John Eaves!

John Eaves
NCC Chair (May 2012-May 2014)
President & CEO, Arch Coal, Inc.

NCC is grateful for the dedicated service of John Eaves who served as Chair of the organization for two years and as Vice Chair for two years. During John’s tenure, the NCC successfully transitioned to new management leadership, re-chartered the NCC for the 2014-2015 term, advanced numerous administrative improvements and completed a high-interest study assessing the value of the existing coal fleet.

Thank you, John for your diligence in weathering the many storms of leading a volunteer organization. We wish you fair weather in the future!

Welcome Jeff Wallace & Mike Durham!

Jeff Wallace
NCC Chair 2014-2015
Vice President Fuel Services
Southern Company Services

Mike Durham
NCC Vice Chair 2014-2015
President & CEO
Advanced Emissions Solutions Inc.
OH WHAT A NIGHT!

On May 13th, 2014, the National Coal Council celebrated its 30th “Pearl” Anniversary with an extra special reception at the Sequoia Restaurant on the banks of the Potomac River in Washington, DC. It was WOW!
WHO KNEW?*
NETLs Energy Data Exchange

The Energy Data eXchange (EDX) was developed and is maintained by NETL-ORD as an online system to support internal coordination and collaboration as well as timely tech transfer of data-driven products across NETL’s research portfolios.

EDX coordinates historical and current data and information from a wide variety of sources to facilitate access to research that crosscuts multiple NETL projects/programs.

EDX provides external access to technical products and data published by NETL-affiliated research teams.

NETL-affiliated researchers can use EDX’s Collaborative Workspaces to coordinate and share work with a variety of organizations and institutions in a secure environment.

https://edx.netl.doe.gov/

Why was EDX created?

NETL recognized a need to improve coordination and reliable access to information and research products for its own research teams and amongst its collaborators, as well as improve dissemination (tech transfer) of research-driven products. By improving the efficiency of data access and data sharing, EDX facilitates a more rapid and comprehensive utilization of key data needs that crosscut multiple projects/program areas (CO₂ storage, unconventional and conventional hydrocarbon systems, natural gas hydrates, etc.). In addition, EDX provides a cross-cutting system to ensure lasting access to research data and products for future use by NETL and its partners.

NCC MEMBERSHIP APPOINTMENT LETTERS

NCC membership appointment letters for 2014-2015 have been mailed!!! If you have not received your letter, please let me know ~ jellici@NCC1.org.

*A regularly featured column on industry, university and government initiatives in support of clean coal technology development & commercialization.
Robert (Bob) Ciavarella is the President & CEO of Stock Equipment Company and jointly holds the position of Vice President of Power within the Schenck Process Group.

During his long career in the power industry that spans more than 35 years, Bob has held positions of increasing responsibility with Stock/Schenck Process, the Babcock & Wilcox Company, Foster Wheeler Corporation and Ahlstrom Pyropower, Inc., including Managing Director of the Asia Pacific Region, Executive Vice President and Vice President Sales. Having spent the majority of his career in the United States he has also worked for over nine years overseas in the UK and Singapore.

Bob holds a Bachelor of Science degree in engineering from the United States Merchant Marine Academy in Kings Point, NY and a Master’s degree in Business Administration from the Southern Illinois University, Edwardsville.

Among Bob’s career highlights:

- Stock Equipment Company – Chagrin Falls, Ohio President & CEO (January 2008-present)
- Schenck Process GMBH – Darmstadt, Germany Vice President Power Industry (August 2010-present)
- Babcock & Wilcox Company – Barberton, Ohio Vice President International Sales Managing Director Asia Pacific Region (Singapore)
- Foster Wheeler Corporation Acquired Ahlstrom Pyropower Inc.
- Ahlstrom Pyropower Inc. Managing Director Sales & Marketing (Singapore) Vice President CFB Business Unit (San Diego) Managing Director (Walton-on-Thames, England)

Stock Equipment Company is a trusted leader in the global power generation industry providing material handling solutions for nearly 85 years. Stock is a member of the Schenck Process Group, a global market leader of weighing, feeding, screening and automation solutions in the mining, power and process industries.

The company traces its roots back to the early part of the 20th Century when Arthur J. Stock, a 1922 mechanical engineering graduate, formed a company to supply various products to the fledgling power industry just weeks before the 1929 stock market crash. During the 1930s, the company developed a series of innovative shut-off valves, followed by batch-type weighing scales for use in stoker feed systems. From a single welder in the basement of a downtown Cleveland, Ohio building, Stock Equipment Company grew and earned a reputation for innovation and high-quality manufacturing.

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CLIMATE CHANGE

President Preparing for "Last Shot" in Climate Push: Rolling Stone

President Obama is about to take one of his biggest gambles by testing the proposition that "Americans believe that global warming is real and are ready to do something about it," according to an article in Rolling Stone. The item, "Obama's Last Shot," said the centerpiece of the effort is the Chief Executive's use of his presidential powers, in the form of Environmental Protection Agency (EPA) rules to be made public in June, to hasten coal's phase-out from the nation's energy system. According to author Jeff Goodell, opponents charge that the President is engaging in a "War on Coal." But what's harming the fossil fuel is not EPA, the article contends, but "cheap wind, cheap solar, and cheap natural gas." If the agency's rules are successfully implemented, Obama will be on track to meet the 2009 U.S. commitment to cut its carbon emissions by 17% by 2020, Rolling Stone suggested. "But the sad truth is that ... he [still] won't have done enough," it added.

DOE Chief Optimistic on Prospects for Progress on Climate Change

Energy Secretary Ernest Moniz has offered three reasons for hope that the U.S. and the global community can make progress on climate change. Talking with The Christian Science Monitor, the DOE chief first cited "the continually increasing confidence of the scientific community, as demonstrated in [recently released Intergovernmental Panel on Climate Change] reports," and its emphasis that responding to climate risks will be easier if and less expensive if done now. Moniz also pointed to "adaptation to what we're already seeing" in terms of extreme weather and drought, storm surges, rising sea levels and increased wildfire. Finally, the Secretary offered his view as a technologist that cost reductions in low-carbon technologies will continue "very, very rapidly." As technologies such as solar and light-emitting diodes (LEDs) continually drop in price, Moniz said, "we will see the deployment go up and the policy be easier to implement."

EPA: U.S. Leads Industrialized Nations in Cutting GHG Emissions

The U.S. led industrialized nations in cutting emissions of greenhouse gases in 2012, with a reduction of 3.4% to 6.5 billion tonnes, the lowest level since 1994, the Environmental Protection Agency (EPA) reported. According to Reuters, the fall was due in part to low natural gas prices and a shift from coal. Meanwhile, European Union emissions declined by 1.3%, to 4.5 billion tonnes, during 2012, Reuters reported from Oslo. Overall, emissions from more than 40 countries were 10% below 1990 levels in 2012, according to a Reuters compilation of national data submitted to the United Nations. However, it reported, with emissions rising elsewhere, the rate of decline was too slow to limit average world temperature rise to 2 degrees Celsius (3.6 degrees Fahrenheit) above pre-industrial times, a ceiling set by almost 200 nations to avert droughts, heat waves and rising seas. According to the Intergovernmental Panel on Climate Change (IPCC), global emissions rose to 49 billion tonnes in 2010 from 38 billion in 1990, Reuters reported.

BY THE NUMBERS

Two New Coal-Fired Power Plants Came on Line in 2013, EIA Reports

Two new coal-fired power plants, both delayed projects originally scheduled for completion in 2011-2012, accounted for all of the new coal capacity added to the U.S. lineup in 2013, according to DOE's statistical unit, the Energy Information Administration (EIA). The plants represent more than 1,500 MW of capacity. The Sandy Creek Energy Station in Texas is a 937-MW conventional steam coal plant, while Indiana's Edwardsport plant is a 571-MW IGCC plant, "one of only two of the many proposed IGCC projects that actually advanced into construction," EIA noted. According to the DOE unit, 2013's total capacity additions of just over 13,500 MW was less than half of that added the previous year. Coal accounted for 11% of the utility-scale generating capacity growth. Natural gas represented just over 50% of the increase, with solar at about 22%, and wind almost 8%.
Coal Currents (continued)

ENVIRONMENTAL REGULATION

Supreme Court Upholds Agency’s Authority on Cross-State Air Pollution (CSAPR)

The U.S. Supreme Court has upheld the EPA’s authority to regulate emissions from coal-fired power plants in 27 Midwestern and Appalachian states that waft across state lines to the East Coast. The New York Times referred to the high court’s 6-2 decision on the Cross-State Air Pollution Rule as “a major environmental victory for the Obama Administration,” and a signal that efforts to use the Clean Air Act to address global warming could withstand legal challenges. Utilities and several states sought to block the rule from taking effect, and a federal appeals court in Washington agreed with them in 2012, the Associated Press (AP) reported. But the Supreme Court said the Clean Air Act allowed EPA to implement federal plans in states that had not adequately addressed pollution that blows downwind. Justice Antonin Scalia dissented, asserting that the court majority had “zero textual basis” in the Clean Air Act for justifying EPA’s approach and encouraged “future rogue administration of the law,” the AP reported.

Federal Court Gives Nod to EPA’s Mercury and Air Toxics Standards (MATS)

A federal appeals court has upheld one of the EPA’s landmark rules, the Mercury and Air Toxics Standards (MATS), which regulates pollutants from coal-fired power plants. Opponents argued that the agency relied on a flawed review process in formulating the rules, National Journal’s Energy Edge reported. Industry groups also contended that the December 2011 MATS failed to take into account the cost of the pollution controls and other measures that would be required; Energy Edge reported that the rules are expected to cost some $9.6 billion annually “and have spurred coal-plant retirements across the country.” Despite its success at the U.S. Court of Appeals for the D.C. Circuit, the National Journal publication suggested, “some questions about the rule may still dog the agency.” It noted that a dissenting opinion hinged on whether EPA should have considered cost ahead of time. “That’s something EPA opponents have long sought ... although it’s not required under the Clean Air Act,” the publication indicated.

MSHA Releases Final Rule Cutting Limits on Miners’ Exposure to Coal Dust

The Labor Department’s Mine Safety and Health Administration (MSHA) has announced release of a final rule to lower miners’ exposure to respirable coal dust in all coal mines. The rule, published as a proposal in October 2010, lowers the overall dust standard from 2.0 to 1.5 milligrams per cubic meter of air. For certain miners with black lung disease, the standard is cut in half, from 1.0 to 0.5. The rule also increases the frequency of dust sampling, and requires coal operators to take immediate action when dust levels are high. In addition, the Associated Press reported, coal mine operators will be required to use new technology to provide real-time dust levels. The requirements will be phased in over two years. “Today we advance a very basic principle: you shouldn’t have to sacrifice your life for your livelihood,” Labor Secretary Thomas Perez said in announcing the rule. “I believe we can have both healthy miners and a thriving coal industry.”

Judge Strikes Down Minnesota Law Barring New Generation From Coal

A federal judge struck down a landmark 2007 Minnesota state law that prohibits new power generation from coal. The jurist said the statute regulates business activities of out-of-state utilities in violation of the U.S. Constitution, which gives Congress the power to regulate interstate commerce. According to the Star Tribune, Minnesota’s Next Generation Energy Act effectively barred utilities in the state from importing new coal-based electricity or from building new coal-based power plants. But interests in neighboring North Dakota contended that the law blocked that state’s utilities from signing new coal-based power plant deals, even in other states, improperly restricting their electricity sales. U.S. District Judge Susan Richard Nelson found the Minnesota law “overreaches,” terming it a “classic example of extraterritorial regulation.” According to the Star Tribune, she commented that if every state had such laws, “The current marketplace for electricity would come to a grinding halt,” and enjoined Minnesota from enforcing key sections. Minnesota Gov. Mark Dayton said the state would appeal the ruling.
Coal Currents (continued)

ENERGY ISSUES

Bitter Winter Illustrates Risks of Cutting Back Coal-Fired Generating Capacity

The potential ramifications of closing down significant amounts of coal-fired generating capacity were underscored this past winter. A Reuters market analyst, citing a Federal Energy Regulatory Commission (FERC) report, wrote that "exceptionally cold weather coupled with fuel shortages and equipment failures pushed the U.S. electricity grid close to emergency conditions repeatedly." Severe weather drove natural gas demand to record or near-record highs and forced power generators to turn to coal and fuel oil, FERC reported. "The winter posed a severe threat for U.S. gas and electricity networks," the analyst summarized. "On this occasion, the system was able to cope, just." Meanwhile, the National Center for Policy Analysis's Environment and Incentives blog noted that Sen. Lisa Murkowski (R-AK) recently said that 89% of the coal capacity due to go offline was utilized to meet demand this past winter. And Platts reported that FERC Commissioner Tony Clark warned that disruptions of coal supply shipments in the Upper Midwest and elsewhere could create challenges for the electricity sector, "particularly as a number of plants are set to retire in coming years."

Forbes: Solar Power Booming, But Coal Will Remain Generating "Mainstay"

Solar power is booming in the U.S., with record amounts of capacity installed last year and prices "closing in on price parity with the likes of coal," an article in Forbes reported. However, the biggest sources of U.S. energy remain "the old standbys," including coal, which by itself contributes nearly 8 times as much as wind and solar generation combined. And while demand for the fossil fuel has fallen off, the article indicated, "coal is certainly not dead. Not even close to it." Forbes noted coal's key role in meeting the demands of the bitter winter, and said that the recent jump in natural gas prices has slowed the move away from coal. "For all the talk of 'grid parity,' the simple reality is that even combined with far more power generation from natural gas, renewable alternatives will need decades to push out coal," the publication added. "Coal will remain a mainstay of U.S. power generation for decades to come." Even with stricter environmental rules coming domestically, a Miami Herald article reported, "the global outlook for coal is bright, and U.S. coal producers hope to take advantage by increasing exports."

MINING & TRANSPORTATION

MSHA IG Calls For Policy Guidance on Mine Operators' Reporting Programs

While the Mine Safety and Health Administration (MSHA) has acted to detect and deter the underreporting of accidents and occupational injuries and illnesses, additional action is needed, the Labor Department's Inspector General concluded. MSHA found more than 9,000 violations during audits and inspections and other non-audit activities during 2000-2012, the IG noted, resulting in more than $1 million in proposed civil penalties. However, the review recommended that the agency enhance its current knowledge of underreporting by deriving better estimates of "the overall prevalence, magnitude, and distribution" of the practice. It also called on MSHA to issue policy guidance designed to address operators' safety policies, programs and practices that might discourage the reporting of work-related injuries and illnesses by miners. The IG found that some miners perceive such operator programs, including progressive discipline for repeated reports of injuries, post-injury drug testing and incentive programs, as disincentives to reporting such injuries and illnesses.

Explosion of Activity in Bakken Field Impacting Coal Traffic on the Rails

The explosion of oil production activity in North Dakota's Bakken field, as well as unprecedented cold weather, have contributed to severe railroad congestion in Chicago, through which a quarter of all U.S. freight rail traffic passes, and delays in getting coal to power plants. According to Bloomberg, transport snarls are one reason why coal prices on the New York Mercantile Exchange (NYMEX) rose 5.5% in the past year, with coal from Wyoming's Powder River Basin up 26%. According to DOE's Energy Information Administration (EIA), utilities had about 132 million tons of thermal coal in inventory in January – the lowest amount since 2006 – the article reported. "Utilities are having a tough time getting the coal they already purchased," an executive at a Colorado-based coal analytics company told Bloomberg. BNSF railway will need most of the rest of this year to untangle the train delays in the corridor that serves the Bakken field, the company's CEO told Bloomberg in an interview.
Coal Currents (continued)

IN THE INDUSTRY
Utility Announces Delay to 2015 in Startup of Kemper Plant

Southern Company will delay startup of its Kemper power plant, a 582-megawatt (MW) integrated gasification combined cycle (IGCC) facility in Mississippi. Southern’s Mississippi Power unit plans to complete the gas-fired, combined cycle portion of the project this summer, Reuters reported, but is delaying until the first half of 2015 the in-service date of its gasification system, citing adverse weather, unexpected worker turnover and installation “inefficiencies” related to the complex piping in the gasification system. The news service noted that the industry has been closely watching progress on the plant because it will be able to capture carbon dioxide emissions, although Southern has asked the Environmental Protection Agency (EPA) not to use Kemper as a standard for the industry, due to its unique location. National Geographic reported that Kemper is not the only project now underway; SaskPower, a Canadian utility, is refitting a 110-MW unit of its old Boundary Dam Power Station to capture 90% of its carbon dioxide (CO2) emissions and pump them underground into a partially depleted oil field.

Todd H. Cunningham, who writes the “Coal Currents” column for the Council’s monthly National Coal Advisory, is available for additional writing projects involving coal and other energy policy issues. For information on Todd’s background and experience, see his LinkedIn profile at www.linkedin.com. To discuss your editorial needs, contact Todd via email at tcunningham03@comcast.net.