

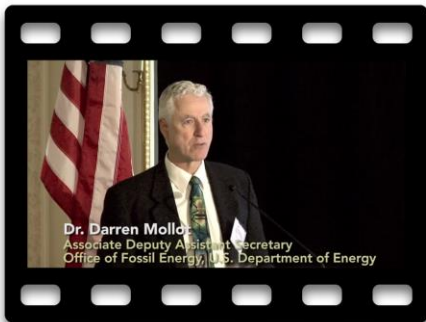
NATIONAL COAL COUNCIL ~ NOVEMBER 2016

DOE'S DARREN MOLLOT HIGHLIGHTS OUTLOOK FOR CCUS

NCC was pleased to welcome **DOE Office of Fossil Energy's Associate Deputy Assistant Secretary, Dr. Darren Molloy** as the keynote presenter at its 2016 Annual Fall Meeting, October 4-5 in Milwaukee, Wisconsin. Dr. Molloy provided an update on the outlook for CCUS, summarizing the following key punchlines:

- Carbon capture is a domestic and global necessity.
- CCUS will play a critical role in cutting emissions needed to limit global warming to 2°C. Limiting warming to less than 2°C may not be possible without CCUS.
- CCUS is demonstrated and possible today, with today's technologies.
- Transformational technologies in the pipeline will enable reducing the costs of capture.
- CCUS deployment will require a combination of policy support and technological innovation. DOE analysis found that Federal RDD&D combined with tax credits could drive significant deployment.

[DOE CCUS White Paper - August 2016](#)



Dr. Molloy noted that a priority of the Office of Fossil Energy is to accelerate a commercial pathway to CCS. Programs such as "Innovation CCS" and advanced carbon technologies R&D are being pursued along with domestic and international partnerships and efforts to reduce deployment barriers.

Dr. Molloy thanked NCC members for their most recent report for Secretary Moniz on CO₂ utilization, highlighting in his remarks the importance of pursuing CO₂ use to increase revenue and decrease storage. He noted that recent DOE efforts related to CO₂ use and reuse were focused on converting CO₂ to useful products and fuels, cutting CO₂ emissions where geologic storage is not feasible. He cited the following applications:

- Enhanced Oil Recovery
- CO₂ as Feedstock – to produce chemicals, fuels and polymers
- Non-geologic Storage of CO₂– to produce stable, solid materials
- Indirect Storage – removing CO₂ from the air or enhancing carbon intake by terrestrial vegetation and soils
- Beneficial Use of Produced Water – finding uses for water produced from CO₂ storage in saline formations
- Breakthrough Concepts – including novel applications for CO₂ such as using microbes that consume CO₂ to produce useful products or fuels

Presentations and videos from all meeting presenters at the 2016 NCC Fall Meeting are posted on the NCC website at <http://www.nationalcoalcouncil.org/page-Meeting-Presentations.html>.

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MemberNews

NCC Community News

NCC members are invited to submit news items regarding their companies and organizations to Janet Gellici at info@NCC1.org.

Kemal Williamson, Peabody Energy

Best ESG-Responsible Mining Company Global 2016

Capital Finance International 2016 Awards

Peabody Energy has been named the most responsible global mining company for 2016, recognizing the company's excellence in environmental, social and governance (ESG) standards and performance. An international panel of judges credited Peabody as being a "pioneer in the move toward sustainable business practice" and noted that the company "essentially wrote the book on environmental stewardship for the coal industry." Peabody believes that longer-term investments in next-generation CCUS technologies are necessary to transition to the ultimate goal of near-zero emissions from coal-based power. Peabody's approach is documented in its [Statement on Energy and Climate Change](#).

Jeff Erikson, Global CCS Institute

Armond Cohen, Clean Air Task Force

What is the Future of Carbon Capture?

The **Global CCS Institute** will release its **2016 CCS Status Report** on November 15th. The report is considered to be the authoritative global guide to carbon capture's development. GCCSI will host a presentation on the report and a panel discussion featuring Jeff Erikson, Armond Cohen and others on November 15th, 9:30-11 am Eastern at the National Press Club in Washington, DC. Contact Natalia Sharova at natalia.sharova@globalccsinstitute.com.

Betsy Monseu, American Coal Council

Coal Trading Conference

The American Coal Council (ACC) is hosting its annual Coal Trading Conference in association with the Coal Trading Association, December 5-6 in New York City. The event features a well-attended reception of financial industry associates and a full-day program on issues impacting markets for coal. NCC member companies will be represented as presenters on the program, including Total Spectrum, Dominion and Dynegy. For more information: www.americancoalcouncil.org

Fred Palmer, Total Spectrum

Featured Presenter: The New Energy Paradigm

Fred Palmer, Partner, Total Spectrum is the featured guest presenter the Ohio Valley University's conference, "The New Energy Paradigm for 21st Century Coal" on November 14, Vienna, WV. The event will provide an overview of the new coal research campus at the University and address coal emerging technologies. The event is free of charge: <https://www.ovu.edu/ovu-coal-conference.html> See page 7 for more info on OVU's new coal research center initiative.

Scott Teel, Southern Company

Kemper Produces First Electricity Using Syngas

Southern Company subsidiary Mississippi Power has achieved a major milestone with the first electricity generated by clean syngas produced from Mississippi lignite at the company's Kemper County energy facility. The first-of-its-kind facility paves a path forward for U.S. and global energy companies. <http://mississippipowernews.com/news-releases/>

COAL

RESOURCES & NEWS

U.S. Department of Energy
www.energy.gov
Office of Fossil Energy

National Energy
Technology Laboratory
www.netl.doe.gov
Coal & Power Systems

First cold snap of winter grips China, utilities face coal crunch

[Reuter 11-2-16](#)

World's Largest Carbon-Capture Plant to Open Soon

[Scientific American 10-4-16](#)

Court Brief: Partial CCS in NSPS is Not Adequately Demonstrated, Achievable
[Exchange Monitor 10-14-16](#)

We're placing far too much hope in pulling CO₂ out of air, scientists warn
[Washington Post 10-13-16](#)

German economy minister sees no brown coal exit before 2040
[Reuters 10-27-16](#)

Solar energy can't survive without massive subsidies
[The Hill 10-27-16](#)

Fossil Fuel Use in Canada to Climb, but Slowly, Energy Board Predicts
[Exchange Monitor 10-27-16](#)

FuelCell & ExxonMobil Announce Location for Fuel Cell Carbon Capture Plant
[ExxonMobil News Release 10-27-16](#)

The Truth About Carbon Capture – Jay Faison
[ClearPath Blog 10-27-16](#)

National Coal Council
NationalCoalCouncil.org

NCC Member Focus

Nancy Mohn was appointed to serve on the National Coal Council in 2005 and has been an active member of the Coal Policy Committee and a participant in numerous NCC reports. Nancy brings to the NCC more than 40 years of experience in developing and improving power technologies to increase reliability and affordability, and to reduce their environmental impact. NCC is fortunate to have Nancy on board!

Nancy Mohn is an experienced strategy and marketing leader with expertise in strategic planning, business planning, technology innovation, market and product development, industry and competitor analysis, strategic messaging, and acquisitions and divestitures. She is a recognized expert in technology and policy solutions for reducing CO₂ emissions from fossil energy technologies.

Nancy launched her power sector career at Combustion Engineering (CE) where she managed corporate marketing efforts and supervised engineers and technicians who provided technical services to utility and industrial customers. Following the acquisition of CE by ABB Power Plant Systems, Nancy helped define the company's U.S. sales and distribution strategy, including efforts to penetrate the China market with CFB technology.

With Alstom's acquisition of ABB's power business, Nancy was again called upon to define the business strategy for the merged boiler businesses. Working in Alstom's Environmental & Energy Systems division, Nancy oversaw development and deployment of new product introductions. She developed the U.S. response to climate change for the company's power businesses. Nancy also served as Alstom's Director of Strategic Messaging for Power Sector Communications where she provided direct support to Executive and CEO level staff in strategic messaging.

While at Alstom, Nancy directed strategic marketing efforts for the company's global thermal and renewable power businesses. She headed up initiatives to develop and execute Alstom's technology positioning and global messaging for climate change and sustainability. As Director of Strategy & Strategic Marketing for Alstom US, Nancy served as a member of the U.S. leadership team, advising on market and customer opportunities.

Following Alstom's merger with GE Power, Nancy led growth initiatives between GE Water and the former Alstom Power Services.

Nancy earned her BS in Civil Engineering from Pennsylvania State University, her MS in Civil & Environmental Engineering from the University of Wisconsin, and her MBA from the University of Connecticut. She is a registered Professional Engineer in Connecticut, holds a patent on Intelligent Chemistry Monitoring Systems and is engaged in various professional and industry organizations supporting sustainable use of fossil fuels.



NANCY C. MOHN
ENERGY TECHNOLOGIST

In September 2016, Nancy Mohn retired from a successful corporate career in the power technology sector. Nancy notes, however, that while she has retired from corporate life, she has not retired from her career and looks forward to continuing to contribute to advocacy for a balanced and clear U.S. energy policy. She also continues to support the critical need for STEM education to build the next generation of technology pioneers.

In reflecting on her job history, Nancy notes that she has enjoyed a hybrid career with one foot solidly in technology and the other in leveraging technology through strategy, marketing and energy policy advocacy. She has worked for a fascinating group of international companies created by mergers and acquisitions in the ever-fluctuating power sector business.

While pursuing her MBA, Nancy realized that the majority of students were not from technical disciplines and recognized the need for technologists to find ways to explain "how things work" to a broad audience. This skill is particularly valued when that audience is making decisions on investments and financial returns for an industry, writing regulations, or voting on local energy policy referendums.

Throughout her career, Nancy has advocated for the goals of the power industry (clean, reliable and affordable) by participating in organizations that further these goals, including NCC, the Coal Utilization Research Council, MIT's Center for Environmental & Energy Research, the Carbon Sequestration Leadership Forum and the U.S. Energy Association.

Nancy's career and advocacy credo is best summed up by her belief that knowledge is power ... and knowledge of how power is produced, transmitted and utilized is critical to those developing the sustainability equation for our nation.

Nancy Mohn
nmohn@aol.com
570-470-9970



HOLD THE DATES FOR NCC 2017 SPRING MEETING MARCH 14-15 – WASHINGTON, DC

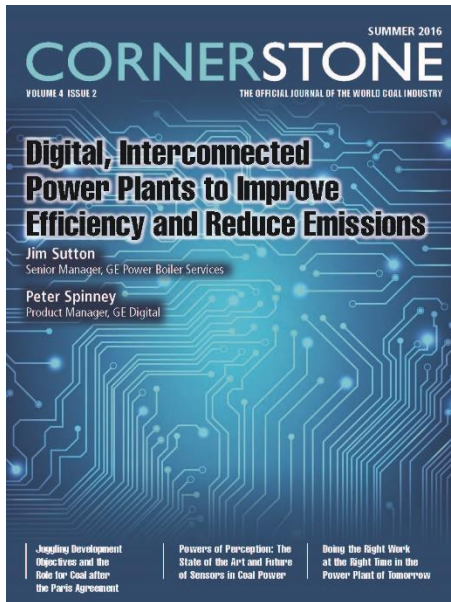


NCC staff is finalizing arrangements for our Spring 2017 Annual Meeting to be hosted in Washington, DC. Prospective dates are March 14-15 – welcoming reception on March 14th; Full Council Meeting on March 15th. We'll have details on hotel logistics out to all NCC members once plans are firmed up. In the meantime, please hold these dates on your calendars.

If you are interested in serving on the Program Development Committee to develop a theme and identify prospective speakers and topics for the meeting, please contact Janet Gellici at jgellici@NCC1.org.

For those in the throes of budget planning for next year, we'd also appreciate your considering a sponsorship for the NCC Spring 2017 meeting. We welcome sponsorships from \$500-\$5,000 and we'll work with you to design something that provides the greatest visibility and benefit for your company. For information on sponsorships, contact NCC Meetings Director Hiranthie Stanford at hstanford@NCC1.org.

NCC FEATURE ARTICLE IN CORNERSTONE MAGAZINE



The National Coal Council is pleased to have a feature article included in the most recent version of Cornerstone magazine (<http://cornerstonemag.net/>). The article, entitled “Policy Parity for CCS Would Move the U.S. Closer to Its Climate Goals,” was written by NCC CEO Janet Gellici. The article reports on key findings and recommendations from the NCC’s report on “Leveling the Playing Field: Policy Parity for CCS Technologies” (<http://www.nationalcoalcouncil.org/studies/2015/Leveling-the-Playing-Field-for-Low-Carbon-Coal-Fall-2015.pdf>) which was chaired by **Glenn Kellow, Peabody Energy** and principally drafted by **Fred Eames, Hunton & Williams**.

Nearly a year after its completion, this NCC report continues to contribute relevant information to the conversation on the importance of policy parity. The report, and article, detail specific measures to level the playing field and advance CCUS deployment, including extending and revising 45Q which continues to be a significant bipartisan supported effort here in Washington, DC. NCC attended a recent briefing at the **U.S. Energy Association (USEA)** on upgrading the 45Q tax plan that featured a stellar panel in support of the House and Senate legislation.

Panelists included:

- Jan Brunner, Senior Energy Policy Advisor to Sen. Capito (R-WV)
- Aaron Goldner, Energy Policy Advisor to Sen. Whitehouse (D-RI)
- Shannon Angielski, Executive Director at Coal Utilization Research Council
- David Mohler, Deputy Assistant Secretary for Clean Coal and Carbon Management at DOE
- Judi Greenwald, Deputy Director for Climate, Environment, and Energy Efficiency at DOE
- Erin Burns, Policy Advisor at Third Way

A press statement on the briefing may be accessed at:

http://media.wix.com/ugd/80262f_2349e5f7ab67413db051e695f65d68ec.pdf



NCC ACTIVITIES & NEWS (continued)

NCC SPEAKING ENGAGEMENTS

This Autumn, NCC's CEO, Janet Gellici, delivered a number of presentations on findings and recommendations from recent NCC reports, including:

Coal Industry Update & The Path Forward for Coal

U.S. Association for Energy Economics/National Capital Area Chapter – Washington, DC

<http://www.nationalcoalcouncil.org/NCC-Presentations/2016-09-Coal-Industry-Update-Janet-Gellici.pdf>

CO₂ Building Blocks: Assessing CO₂ Utilization Options

American Coal Council Webcast

<http://www.nationalcoalcouncil.org/NCC-Presentations/10-24-16-Gellici-ACC-Webcast.pdf>

Keynote Address - The Path Forward for Coal: The Role of Technology Innovation

Power Plant Management & Generation Summit – Houston, Texas

<http://www.nationalcoalcouncil.org/NCC-Presentations/10-24-16-Gellici-Path-Forward-for-Coal.pdf>

Upcoming presentations by Gellici:

~ Briefing on CO₂ Building Blocks: Assessing CO₂ Utilization Options

U.S. Energy Association – Washington, DC – November 15th, 2-3:30 pm

Register to attend: <https://www.usea.org/event/co2-building-blocks-assessing-co2-utilization-options>

~ Carbon Management Technology Conference – July 2017, Houston



WANTED: CHAIR'S ADVISORY COUNCIL MEMBERS 2017

The NCC's Chair's Advisory Council (CAC) works with NCC leadership to advance the strategic objectives of the Council. This special group of NCC members commits to enhancing their financial support to the NCC and to participating in special NCC activities.

In 2016, CAC members participated in a roundtable discussion with **David Mohler, Deputy Assistant Secretary for Clean Coal & Carbon Management**, engaged in preparation of NCC's comments submitted for the Quadrennial Energy Review 1.2, and joined in a DOE-Industry Roundtable Discussion addressing how best to advance recommendations from NCC's Policy Parity white paper.

We are now welcoming memberships for the 2017 Chair's Advisory Council. If you are interested in participating or would like additional information, please contact Janet Gellici at jgellici@NCC1.org.

Thank you for your
CAC 2017
membership.



Dominion



TRI-STATE
Generation and Transmission
Association, Inc.

NCC NEW OFFICE ADDRESS & FAX

Effective August 15th, the NCC office has relocated to a new executive suite in the same building. Please update your records to reflect new info:

1101 Pennsylvania Ave., NW, **Suite 300**, Washington, DC 20004
Phone ~ 202-756-4524, Fax ~ **202-688-2201**

News Worthy from the Department of Energy

U.S. EIA Webinar on Proposed Changes to Coal Data Forms in 2017



The U.S. Energy Information Administration is proposing changes to the information collection on forms EIA-3 (Quarterly Survey of Industrial, Commercial & Institutional Coal Users), EIA-7A (Annual Survey of Coal Production and Preparation) and EIA-8A (Annual Survey of Coal Stocks & Coal Exports) to become effective July 2017. Comments regarding the proposed changes are due November 15th, 2016.

A webinar to discuss the proposed changes is scheduled for November 9 at 2:00 pm Eastern.

Meeting link: <https://usdoe.webex.com/usdoe/j.php?MTID=m474226391db839494ba814ed0bf90633>

Meeting number: 993 773 125

Meeting password: kTKAj639

Audio connection: 1-650-479-3208 Call-in toll number (US/Canada)

Access code: 993 773 125

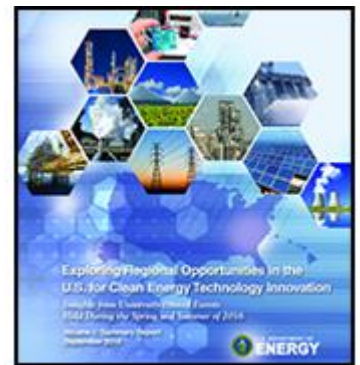
DOE Releases Report on Regional Opportunities for Clean Energy Innovation

The U.S. Department of Energy has released a two-volume report entitled "Exploring Regional Opportunities in the U.S. for Clean Energy Technology Innovation."

Volume I provides a summary of what was learned from numerous regional forums hosted from April to September 2016; Volume II offers an account of the proceedings from the individual university forums. The reports aim to share ideas and lessons learned across regions and among policy makers.

Access the reports here:

<http://www.energy.gov/mission-innovation/university-forums>



SECRETARY MONIZ APPEARS ON CHELSEA HANDLER TALK SHOW

<http://www.washingtonexaminer.com/ernest-moniz-stranger-things-may-not-just-be-fiction/article/2603762>

Energy Secretary Ernest Moniz has testified many times before Congress on varied and interesting topics, but his recent appearance on Chelsea Handler's late-night talk show may take the cake in terms of "strange" appearances. The Secretary game fully joined Ms. Handler and actors Don Cheadle and Joshua Jackson to address questions related to Netflix's series "Stranger Things," in which a 1980s Indiana town gets besieged by a paranormal monster from a parallel universe.



Secretary Moniz noted that "actually we do work in parallel universes" and that he believes the fictional DOE lab in the Netflix show was operating in the 1980s. The Secretary noted that he hasn't personally seen the show but that DOE was engaged in basic research that involves theoretical physics exploring aspects of higher dimensions and parallel universes.

Actor Jackson kidded that while "stranger things" was fiction for the Netflix audience, it was autobiography for Secretary Moniz. Stranger things indeed.

WHO KNEW?*

Alternative Clean Energy Center – Ohio Valley University

<https://www.ovu.edu/2014-07-15-17-15-50/2016-news-releases/459-ohio-valley-university-to-build-alternative-clean-energy-facility.html>

Coal can indeed be a clean energy source and Ohio Valley University in Vienna, West Virginia is doing something to let the world know about it.

The faith-based liberal arts college has initiated development of an innovative, commercial scale Alternative Clean Energy (ACE) training center to be headed up by Jeff Dimick, Executive Vice President of Ohio Valley University (www.ovu.edu).

The facility is scheduled to be operational in late 2018 and is designed to utilize about 600 tons of coal per day, producing up to 3,000 barrels of liquids a day. The site will produce mixed alcohols (ethanol and methanol), along with other energy-related byproducts through patented processes utilizing coal as the primary feedstock. The facility will produce fuels, hydrogen and electricity and capture carbon dioxide (CO₂). The project integrates multiple existing technologies into a single facility to demonstrate the commercial viability of clean energy from coal.

Waste heat from the facility will be used to produce electricity. Discussions are underway to create a laboratory in conjunction with the West Virginia Geological and Economic Survey for research and education in the recovery of Rare Earth Elements from coal ash sources. An additional research opportunity relates to Enhance Oil Recovery (EOR) utilizing old oil wells located in the Ohio River Valley.

It's expected the facility will create 60 new jobs and have a favorable impact on the local West Virginia economy which has been negatively impacted by the recent decline in coal production. OVU currently offers a baccalaureate degree in Energy Management and Production Engineering; students will have an opportunity to intern at the ACE facility.

OVU retained Fluor Corporation to provide initial technical engineering services in development of the ACE facility. TCG Global, LLC is also a principal in the project, providing a gasifier to produce clean syngas from coal.



Alternative Clean Energy
OHIO VALLEY UNIVERSITY

***A regularly featured column on industry, university and government initiatives in support of clean coal technology development & commercialization.**