

NATIONAL COAL ADVISORY ~ AUGUST 2017

U.S. COAL EXPORTS A BRIGHT SPOT ON THE HORIZON



There's been some good news lately regarding U.S. coal exports. As reported by the Energy Information Administration (EIA) in mid-July, U.S. coal exports have increased over the past six months. Coal exports for the first quarter of 2017 were 58% higher than in the same quarter in 2016, with steam coal exports increasing by 6 million short tons (MMst) and metallurgical coal exports increasing by 2 MMst. Most of these exports were shipped from Atlantic Coast and Gulf of Mexico ports.

<https://www.eia.gov/todayinenergy/detail.php?id=32092>

In late July, Pennsylvania-based Xcoal Energy and Resources announced an agreement to sell approximately 700,000 tons of U.S. thermal coal by year-end 2017 to Ukraine's Centrenergy PJSC for power generation. This represents a significant increase in thermal exports to the nation; according to EIA, U.S. thermal coal exports to the Ukraine in 2016 totaled just over 32,200 MMst. Xcoal's first shipment is expected to arrive in Ukraine in late August.

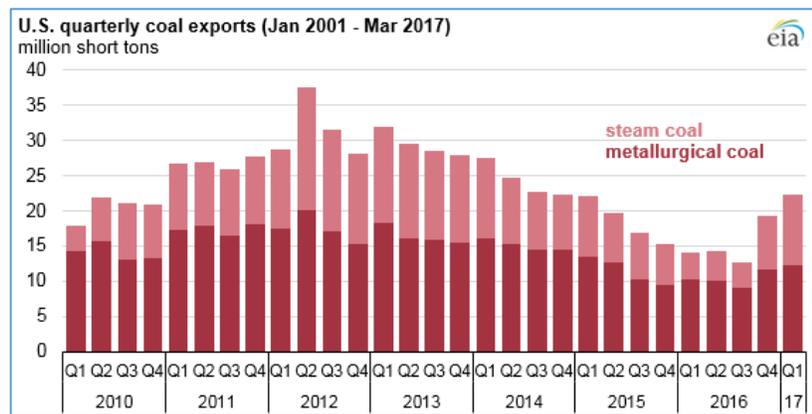
Energy Dominance via U.S. Energy Exports

The Trump Administration's focus on establishing the U.S. as a global energy provider via exports of U.S. energy resources was recently emphasized during an event on Unleashing American Energy hosted at the U.S.

Department of Energy. During the event, President Trump unveiled six initiatives to enhance America's energy dominance, including a directive to the U.S. Department of Treasury to "address barriers to the financing of highly efficient, overseas coal energy plants." In his remarks, the President cited Ukraine's need for "millions and millions of metric tons right now" as an example of the opportunity for U.S. coal producers to enhance exports to international markets.

<https://www.whitehouse.gov/the-press-office/2017/06/29/remarks-president-trump-unleashing-american-energy-event>

Article continues on page 5.



**NETL DIRECTOR TO KEYNOTE
NCC 2017 ANNUAL FALL MEETING
SEPTEMBER 26-27 - BIRMINGHAM, AL**



NCC is pleased to confirm that **Dr. Grace M. Bochenek, Director of the National Energy Technology Lab (NETL)** will deliver the Department of Energy Keynote Address at the Council's 2017 Annual Fall Meeting. We look forward to learning more about NETL's direction under the new Trump Administration and Secretary Perry's DOE leadership.

NCC's 2017 Annual Fall Full Council Meeting will be hosted September 27th at the Ross Bridge Resort in Birmingham, Alabama. Program and registration details are now available on the NCC website <http://www.nationalcoalcoal.org/page-NCC-Events.html>

Program at a Glance

Tuesday, September 26th

- 1:30-2:30 pm Communications Committee Meeting
- 4:30 pm Meeting Registration Opens
- 6:00-7:30 pm Welcoming Reception

Wednesday, September 27th

- 8:30 am-12:15 pm Full Council Meeting
- 12:15-1:15 pm Grab'n'Go Boxed Lunch
- 12:30-4:30 pm Tour of National Carbon Capture Center

**MEETING REGISTRATION IS NOW OPEN!
DEADLINES: HOTEL RESERVATIONS - AUGUST 22nd
MEETING REGISTRATION - SEPTEMBER 15th**

**Thank You Sponsors!
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Janet Gellici, NCC CEO
Hiranthie Stanford
Director Membership & Meetings

Fred Eames/Julia d'Hemecourt
NCC Legal Counsel

Hunton & Williams

NationalCoalCouncil.org

1101 Pennsylvania Ave. NW, #300
Washington, DC 20004
(202) 756-4524



NCC Community News

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

Mike Holmes, Lignite Energy Council

Coal States Try New Ideas to Turn Carbon Into Cash [Inside Energy June 16, 2017](#)

Mike Holmes comments on opportunities associated with CO₂.

Vicky Sullivan

American Coalition for Clean Coal Energy

Coal Plant Retirements Update

<http://www.americaspower.org/wp-content/uploads/2017/06/Coal-Retirements-Paper-June-2017.pdf>

ACCCE's latest report on the retirement of coal-fired electric generating units as of June 2017.

Carbon Management Technology Conference Features Presentations from NCC Members

<http://fscarbonmanagement.org/cmtc/2017>

The 2017 CMTC "Global CCUS Innovation Nexus" featured presentations from NCC members and associates, including Fred Eames (Hunton & Williams), Jeff Erikson (Global CCS Institute), Vello Kuuskraa (Advanced Resources International), Chuck McConnell (Rice University) and Bob Williams (Princeton University). See page 6 for a summary of NCC CEO Janet Gellici's presentation at the event.

NCC ASSOCIATES NEWS

Chuck McConnell, Rice University America's Next Energy Crisis

[Forbes July 10, 2017](#)

McConnell opines on the need for resilient and reliable sources of energy, notably coal and nuclear power plants.

ClearPath

The Carbon Capture Game Changer

<https://clearpath.org/jays-take/carbon-capture-game-changer>

Check out this clever video-graphic explanation of the Allam Cycle, the process used in the NET Power demonstration plant, and how it could revolutionize clean energy in the U.S. and globally.

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](#)

Why coal is Number One
[Investor's Business Daily](#)

U.S. gas market rebalances as power producers return to coal
[Reuters](#)

Don't Count Out Coal Yet
[U.S. News & World Report](#)

As Beijing Joins Climate Fight, Chinese Companies Build Coal Plants
[New York Times](#)

Former Dem Congressman:
End the war on coal
[The Hill](#)

Don't be so quick to dismiss Trump's coal mining initiative
[NY Post](#)

Investors plan \$80 million coal enhancement facility for the Powder River Basin
[Casper Star Tribune](#)

The Big Picture: SO₂ Success
[Power Magazine](#)

Wyoming's coal investment goes to Washington
[Casper Star Tribune](#)

Why We Should Take a Super-Critical Look at Coal Financing
[GE](#)

National Coal Council
NationalCoalCouncil.org

NCC Member Focus

Shannon Angielski's support for the NCC preceded her official appointment to the Council in 2015. NCC has benefited for many years from Shannon's expertise, management and writing skills on numerous NCC reports. NCC is grateful for your service, Shannon!

Shannon Angielski is a principal at Van Ness Feldman LLP, a Washington D.C. based law firm that specializes in energy, environment and natural resource policy and law. She serves as the Executive Director of the Carbon Utilization Research Council (CURC), an organization of utilities, producers, equipment suppliers, universities and institutions of higher learning, and state based entities interested and involved in the use of fossil fuel resources and the development of fossil fuel-based technologies.

CURC is a leading advocate for advancing public-private partnerships designed to support advanced coal and natural gas technology research, development and deployment programs, and is responsible for the design and implementation of several federal policies necessary to ensure the availability of cost-effective technology solutions for fossil fuel based generation.

Shannon earned her M.S. in Environmental Science and Public Policy from Johns Hopkins University in 2000 and her B.A. in Political Science and International Affairs from the University of New Hampshire in 1994. She is a member of the National Coal Council, the American League of Lobbyists and the Environmental Law Institute, and serves on the board of the Washington Coal Club.



SHANNON ANGIELSKI EXECUTIVE DIRECTOR CARBON UTILIZATION RESEARCH COUNCIL (CURC)

CURC was established in 1998 – as the Coal Utilization Research Council – as an industry coalition focused on technology solutions for the cost-effective use of our coal resources to meet our national energy needs while also achieving environmental and other societal goals. CURC is in the process of expanding its scope to also include natural gas and rebranding under the new name – Carbon Utilization Research Council. CURC's mission remains the same – to advance fossil energy use (coal and natural gas) – through the development and deployment of technology.

CURC's expanded mission provides a cohesive industry voice on fossil energy technology development to ensure successful technology development that will provide low-cost, low-carbon generating options; a more diverse and balanced generation portfolio; new high-paying, skilled jobs; and improved cost and environmental competitiveness of fossil fuels.

Shannon Angielski
Executive Director
Carbon Utilization Research Council
1050 Thomas Jefferson St., NW
Washington, DC 20007
(202) 298-1825
sma@vnf.com
www.coal.org
<http://www.curc.net/>

U.S. Coal Exports

(continued from page 1)

In a statement regarding the new deal with Ukraine, Secretary Perry commented on the role the U.S. can play as a secure, reliable energy provider to global markets subject to geopolitical turmoil. "This Administration looks forward to making available even more of our abundant natural resources to allies and partners like Ukraine in the future to promote their own energy security through diversity of supply and source. Partnerships like this are crucial to the path forward to achieve energy dominance."

<https://www.energy.gov/articles/secretary-perry-and-secretary-ross-hail-new-coal-deal-ukraine>

Coal is expected to continue to provide a primary source of energy for emerging economies worldwide. According to Urgewald, an environmental group based in Berlin, about 1,600 coal plants are planned or under construction in 62 countries, potentially increasing global coal-fueled capacity by 43%.

<https://www.instituteforenergyresearch.org/analysis/despite-paris-agreement-china-india-continue-build-coal-plants/>

Jack Porco with Xcoal Energy & Resources, the top exporter of U.S.-origin coals, recently presented an update on global coal markets at The Coal Institute's Summer Seminar. He noted that the U.S. is the second largest seaborne supplier of coking coal (vs. Australia). And while U.S. coking coal exports significantly exceed thermal exports, the latter are an important outlet amid fluctuations in U.S. utility demand, providing an opportunity for U.S. producers to optimize operations.

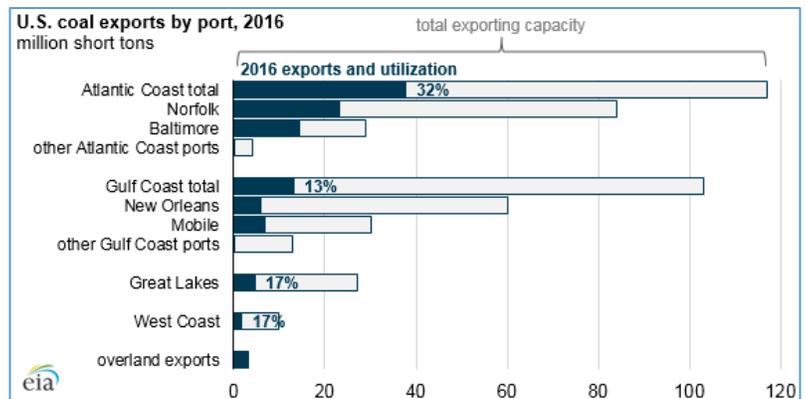
<http://www.thecoalinstitute.org/upcoming-meetings>

According to Xcoal, U.S. exports of thermal coal to Europe YTD May 2017 are up 129% compared to YTD May 2016, although at 5.70 MT (May 2017) exports are unlikely to reach the 2012 peak year level of over 30 MT. U.S. thermal coal exports to India are also up to over 2.0 MT – an increase of 64% YTD May 2017 vs. YTD May 2016 – and on track to exceed 2016's peak year of nearly 2.5 MT.

Access to U.S. thermal coal export market opportunities in Asia-Pacific have been restricted due to a lack of export terminal capacity on the U.S. west coast.

The Alliance for Northwest Jobs & Exports reports that one of three proposed bulk commodity terminals in the Pacific Northwest, the Millennium Bulk Terminals in Longview, WA, recently received a key permit, the first of many required approvals for the 5-year-old proposal.

<http://createnjobs.com/washington-export-terminal-gets-first-permit/>



Global met/coking coal export opportunities for 2017 are promising with steel production up in major markets in Europe, South America and China/India. U.S. coking coal exports annualized at 47 MT for 2017 are 27% ahead of 2016. In summary, Xcoal notes that both seaborne thermal and coking coal demand are expected to grow, reinforcing the role of the U.S. as a key swing supplier. Seaborne coal demand for U.S. coal should remain strong for the balance of 2017.



NCC Activity on Coal Exports

The National Coal Council's leadership has included enhancing U.S. coal exports among its strategic priorities for 2017+. An NCC Working Group on Coal Exports has been formed to identify opportunities and barriers to coal exports. NCC members are invited to participate in this initiative by contacting Janet Gellici at jgellici@NCC1.org.



NCC ACTIVITIES & NEWS

NCC Presentation Highlights Industry Priorities Charting a Course for Coal's Future



NCC CEO Janet Gellici delivered a keynote presentation on “Charting a Course for Coal's Future” at the recent Carbon Management Technology Conference in Houston, highlighting NCC and industry priorities. The event, attended by nearly 200 industry and academic representatives and co-sponsored by the U.S. Department of Energy, focused on carbon capture, utilization and storage (CCUS) technologies that provide options for lowering greenhouse gas emissions while maintaining fuel diversity for sustainable growth.

Gellici's presentation provided an overview of the Trump Administration's priorities for economic/job growth, infrastructure development and regulatory reform. In addressing the Administration's recent objective to achieve energy dominance, Gellici highlighted achievements to date in opening more lands to energy production, easing regulations impeding production and promoting export markets for U.S. energy resources.

Gellici cited the following industry priorities and their relationship to the Administration's critical objectives:

- Optimize/Preserve the Existing Coal Fleet
- Advance New Markets for Coal – including coal conversion, engineered coal for high-value products, CO₂ utilization/CO₂ for enhanced oil recovery, coal upgrading and rare earth element extraction.
- Continue Support of RDD&D for Advanced Coal Technologies – including high-efficiency/low-emissions (HELE), CCUS and transformational technologies, such as the Allam Cycle, super-critical CO₂, pressurized oxy-combustion and chemical looping.
- Advance Export Markets for Coal
- Advance Industrial Markets for Coal

Among the energy-related issues to be addressed in the future, Gellici noted the following:



- FY2018 Budget – including appropriations for advanced coal technology RDD&D
- Infrastructure Plan – including support for coal-related infrastructure projects
- Regulatory Reforms – at the Departments of Energy and Interior as well as at EPA on issues such as New Source Review, Effluent Limitation Guidelines and Coal Combustion Residuals
- Tax Reform – including support for 45Q revisions, Private Activity Bonds and Master Limited Partnerships
- State vs. Federal Jurisdiction – notably related to organized capacity markets

NCC Working Groups Formed

Two NCC Working Groups have been formed – one to identify Advanced Coal Technology RDD&D commercialization needs and another to identify opportunities and barriers to coal exports. NCC members are invited to participate in these initiatives by contacting Janet Gellici at jgellici@NCC1.org.

MORE NCC ACTIVITIES & NEWS

NCC Files Regulatory Reforms Recommendations Based on Existing NCC Reports

The National Coal Council filed comments in response to two Requests for Information related to regulatory reforms. Drawing on findings and recommendations approved by NCC members in recent reports, the Council submitted comments to:

- Environmental Protection Agency (July 6, 2017) – On Postponement of Certain Compliance Dates for Effluent Limitation Guidelines and Standards for the Steam Electricity Power Generating Point Source Category.
 - Department of Energy (July 14, 2017) – On Reducing Regulation and Controlling Regulatory Costs
- Filed comments are available at www.regulations.gov or by contacting the NCC office.



NCC in the News

Can US coal mining make a comeback?

[Mining Technology July 2017](#)

NCC CEO Janet Gellici addresses how the Trump Administration's priorities sync with the interests of the coal industry in this article on U.S. coal.

NCC Annual Fall Meeting Tour Option National Carbon Capture Center

<https://www.nationalcarboncapturecenter.com/>

Immediately following the conclusion of the NCC's Annual Fall Meeting, NCC members and guests will have the opportunity to tour the National Carbon Capture Center (NCCC). The NCCC is a world-class test facility with highly specialized staff whose work is focused on accelerating the commercialization of advanced technologies to enable fossil fuel-based power plants to achieve near-zero emissions.



Those interested in touring the facility on September 27th, 12:30-4:30 pm should register at:

<http://www.nationalcoalcouncil.org/page-NCC-Events.html>

Registration Deadline = Friday, September 15th

THANK YOU! NCC CHAIR'S LEADERSHIP COUNCIL MEMBERS





News Worthy from the Department of Energy

Secretary Perry Cites Importance of Coal Generation

In early July, Energy Secretary Rick Perry toured the Longview Power Plant in West Virginia and spoke about the importance of coal power plants for the country's future. In press reports the Secretary is quoted as saying that "Having a diverse portfolio of all energy resources, including renewables, is important to this country. Picking and choosing a few that fit your political agenda is not good for America." [Bluefield Daily Telegraph 07-07-17](#)

Longview is a 700 MW coal power plant that provides baseload electricity to power 700,000 homes. In April 2017, Stephen Nelson, COO of Longview presented an overview of the Longview Power facility at the NCC's 2017 Spring Meeting. He noted that the plant is highly efficient with the lowest heat rate of any coal plant in North America (39% efficiency rate). Nelson also highlighted the fact that Longview's marginal cost of production is close to the cost of non-dispatchable, subsidized renewables.

<http://www.nationalcoalcoal.org/NCC-Events/2017/1-Nelson-Longview-Power-NCC-Spring-2017.pdf>



EIA Report Projects U.S. Natural Gas Exports Will Quadruple this Year

<https://www.eia.gov/outlooks/steo/report/natgas.cfm>

The Department of Energy's Energy Information Administration (EIA) released a report in mid-July forecasting that liquefied natural gas (LNG) exports would quadruple in 2017. Gross LNG exports are expected to average 1.9 billion cubic feet/day in 2017, compared with 0.5 billion cubic feet in 2016, and rise to 2.8 billion cubic feet in 2018 as new LNG facilities come online.

News Worthy from the Administration & Congress

Infrastructure Development

<https://www.federalregister.gov/documents/2017/07/25/2017-15680/establishing-a-presidential-advisory-council-on-infrastructure>



Rebuilding and enhancing the nation's infrastructure is a top priority for the Trump Administration. In mid-July, the President issued an Executive Order (#13805) establishing a Presidential Advisory Council on Infrastructure to support policy objectives to "advance infrastructure projects that create high-quality jobs for American workers, enhance productivity, improve quality of life, protect the environment, and strengthen economic growth."

The 15-member council, to be established in the U.S. Department of Commerce, is expected to include experts with relevant experience in:

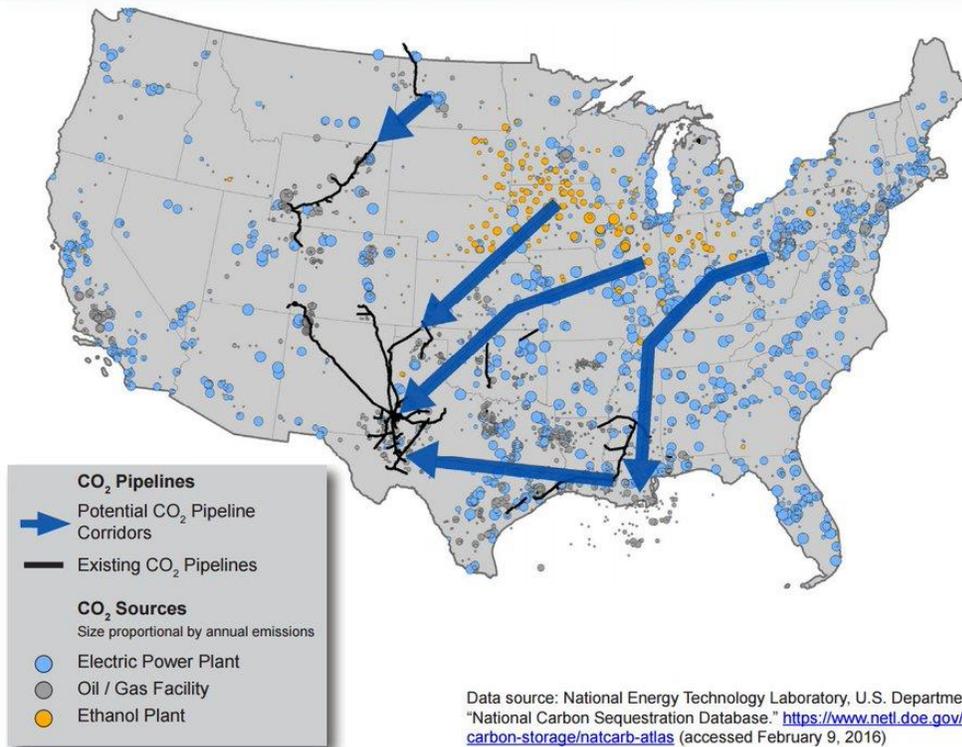
- Real Estate
- Finance
- Construction
- Communications & Technology
- Transportation & Logistics
- Labor
- Environmental Policy
- Regional & Local Economic Development

The Council will be tasked with making recommendations to the President regarding funding and support of infrastructure projects in sectors that include surface transportation, aviation, ports and waterways, water resources, renewable energy, electricity transmission, broadband and pipelines.

Related Reference: CO₂-EOR Working Group Infrastructure Plan for CO₂ Pipelines

<http://www.betterenergy.org/publications/state-work-group-releases-infrastructure-plan-co2-pipeline-networks-cites-potential>

Figure 2: Potential Regional CO₂ Pipeline Corridors (Illustrative Purposes Only)



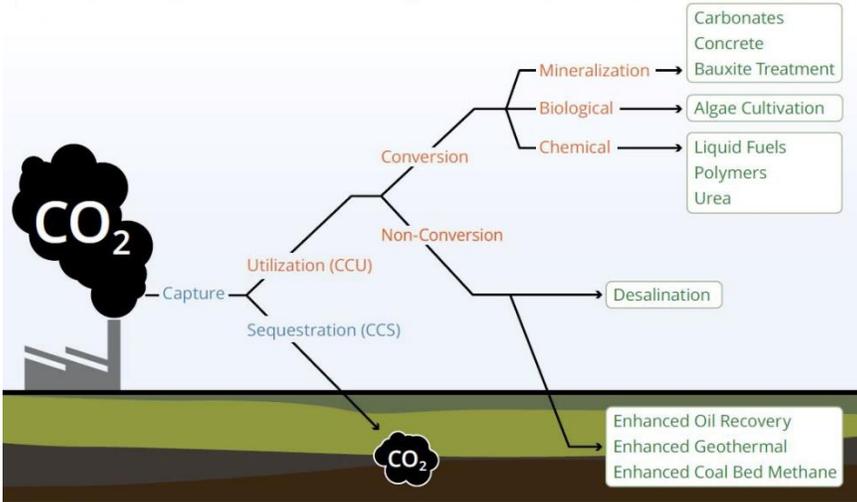
More News Worthy from the Administration & Congress

45Q Extension/Expansion Bill

Future Act Summary

U.S. Senators Heidi Heitkamp (D-ND), Sheldon Whitehouse (D-RI) and Shelley Moore Capito (R-WV) led a broad bipartisan group of Senators in reintroducing legislation to extend and expand a key tax credit to

Paving the way — A selection of today's carbon capture and utilization pathways



Source: Global CCS Institute

encourage technological innovation that would reduce carbon emissions and recognize the need for a diverse energy mix around the world. The 45Q tax credit supports maintaining a place in our nation's energy mix for coal by encouraging development and use of CCUS technologies and processes, spurring adoption of low-carbon technologies to transform CO₂ into useable products.

The **FUTURE Act (Furthering Carbon Capture, Utilization, Technology, Underground Storage and Reduced Emissions)** has broad-based support in Congress and among industry sectors. [Future Act Supporters](#)

Rep. David B. McKinley Opines on Reliable, Affordable Energy

<https://morningconsult.com/opinions/reliable-affordable-electricity-vital-america/>

In an Op-Ed article for Morning Consult, Rep. David McKinley (R-WV) addressed the need for the Administration and Congress to work together to address the need for reliable, affordable energy. The Congressman noted that “we must find a way to ensure our energy portfolio values reliability and affordability, not just a political agenda.”

Congressional Coal Caucus Questions Mine Inspections

<https://halrogers.house.gov/press-releases?ID=CA7F3001-1430-4A0A-AA49-BD7DEA95ECF4>

Members of the Congressional Coal Caucus recently sent a letter to U.S. Labor Secretary Alexander Acosta questioning why there remains such a large contingent of mine inspectors within the Mine Safety & Health Administration (MSHA) despite the large number of mine closures and layoffs in the coal industry over the past five years. The letter noted that the number of operating coal mines in the U.S. had decreased by 35% and the number of employed coal miners declined by 43%; only 6% fewer inspectors were employed during the same timeframe.

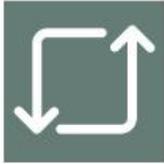


WHO KNEW?*

Enhanced Oil Recovery Institute – University of Wyoming

<http://www.uwyo.edu/eori/>

The mission of EORI is to facilitate a meaningful and measurable increase in recoverable reserves and production of oil and natural gas in Wyoming that may otherwise not be realized. Key to this is the effective and efficient transfer of relevant technology, information and knowledge to Wyoming producers. EORI believes that its mission is being met when producers consider EORI as a vital source of relevant technology, information, expertise and knowledge for Wyoming fields.



Enhanced Oil Recovery Institute

UNIVERSITY OF WYOMING

The Enhanced Oil Recovery Institute (EORI) was created and is financially supported by the Wyoming State Legislature to work with Wyoming oil producers to increase oil production, and as result, increase tax revenues of the state. The governor appoints and the legislature confirms eight commissioners who serve on an [EOR Commission](#) to oversee EORI's financial and strategic planning. EORI is part of the School of Energy Resources at the University of Wyoming. The University provides offices and laboratory facilities in which EORI works. A [Technical Advisory Board](#) (TAB), comprised of leading experts from universities and energy companies in the United States, provides technical oversight of EORI work.

EORI works to help the State of Wyoming and its energy producers to recover a large resource of stranded oil in depleted oil reservoirs as rapidly, responsibly, and economically as possible. EORI is the only institution devoted to enhanced oil recovery in Wyoming oil fields.

In developing the most complete Wyoming EOR-specific dataset that exists, EORI has estimated that additional recovery of oil from the state's depleted oil fields using advanced EOR technology could total more than 1 billion barrels of additional production over the next 20 years. In 2009 approximately 51.3 million barrels of oil were produced in Wyoming. About 12 percent, or 6 million barrels, of that oil was produced from EOR projects.

EORI is dedicated to delivering relevant, topical solutions to producers in Wyoming so that benefits can be realized in a reasonable period of time. The institute is primarily focused on application of new technology through field demonstrations, and supports additional development work as necessary to support commercial-scale implementation. As part of this commitment, the institute has adopted a culture consistent with that of that state's oil producers – EORI's priorities and values align with the oil industry's priorities and values, they talk industry language, and their projects meet industry standards.

In addition to industry cooperation and project co-funding, EORI works closely with the other University of Wyoming centers of excellence – particularly the Carbon Management Institute and the Center for Fundamentals of Subsurface Flow – as well as similar institutions in Houston, Palo Alto, Lawrence, Austin and Golden.

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