

U.S. EXISTING COAL FLEET ANCHORS AFFORDABLE, SECURE ENERGY

Questions regarding the value of the remaining existing fleet of U.S. coal generating plants have been making headlines recently. At the National Coal Council, optimization of the existing fleet remains a top priority as it was in May 2014 when NCC released its report on ["The Value of the Existing Coal Fleet."](#)

In that report, NCC noted that coal generation had dominated U.S. electricity supply for nearly a century by virtue of coal's domestic abundance, accessibility, reliability and low cost. Low cost energy resources keep U.S. electricity prices below those of other free market nations, which translates into more disposable income for U.S. consumers and a competitive edge for U.S. industry in global markets.

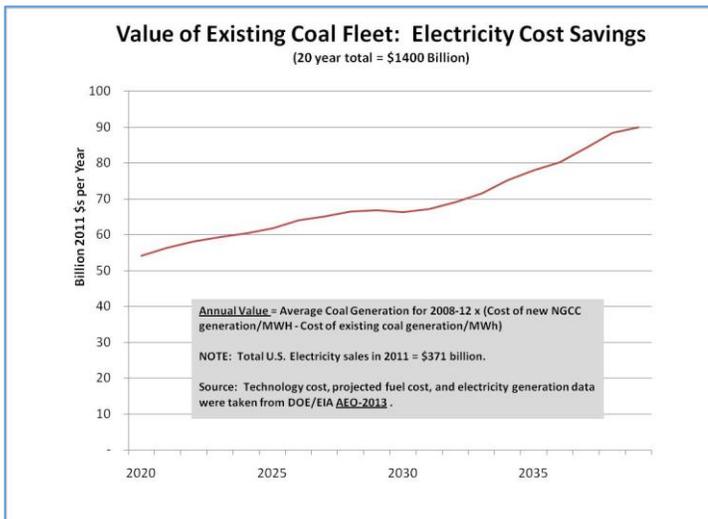
ELECTRICITY PRICE IN 2013, CENTS/KWH

Consumer class	Electricity Price in 2013, Cents/kWh						
	U.S.	Denmark	France	Germany	Italy	Spain	UK
Residential	12	42	20	41	32	31	24
Industrial	7	15	13	20	23	17	16

Diversity Matters

The Edison Electric Institute (EEI), which represents U.S. investor-owned utilities, notes that our nation's electric companies rely on a variety of domestic fuels to generate electricity and that no one fuel is capable of providing the energy to meet all of America's electricity demands.

"Fuel diversity helps to protect electric companies and their customers from contingencies such as fuel unavailability, fuel price fluctuations, and changes in regulatory practices that can drive up the cost of a particular fuel. Fuel diversity also helps to ensure stability and reliability in electricity supply and strengthens national security." EEI at www.eei.org



In its report, NCC assessed the cost of replacing coal with natural gas, conservatively estimating that the impact on the U.S. economy would be:

- A 1.5% (\$240 billion) decline in GDP
- A loss of 2 million jobs/year
- An increased cost of electricity of \$90 billion/year in 2040

Replacing coal with natural gas would require:

- 14 trillion cubic feet of natural gas – equivalent to the combined production of Texas, Oklahoma, Louisiana and the Gulf of Mexico
- \$800 billion to build power plants, pipelines and storage infrastructure (\$2014)

Continued on page 5.

NCC 2017 ANNUAL FALL MEETING SEPTEMBER 26-27 – BIRMINGHAM, AL



Hold the dates for NCC's 2017 Annual Fall Meeting at the Ross Bridge Resort in Birmingham, Alabama. Program and registration details soon!

Program development efforts are underway for the NCC's Annual Fall Meeting with help from our Program Development Committee members:

Ellen Ewart, Coronado Coal
Maohong Fan, University of Wyoming
Danny Gray, Charah LLC
Jerry Oliver, Global Tech
Connie Senior, ADA-ES

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
12:30-4:45 pm Tour of National Carbon Capture Center

NCC in the News

"CO2-EOR: A Win-Win for Energy, the Economy and the Environment"

By Janet Gellici, CEO, NCC

American Coal Magazine Issue 1 2017 – American Coal Council

<http://www.nxtbook.com/naylor/CCWB/CCWB0117/index.php?startid=28>

"Trump's clean energy agenda fueled by Chinese coal"

Washington Examiner – 05-22-17 – Interview with Janet Gellici

<http://www.washingtonexaminer.com/trumps-clean-energy-agenda-fueled-by-chinese-coal/article/2623371>

NCC LEADERSHIP

Greg Workman, NCC Chair

Director Fuels
Dominion Resources

Deck Stone, NCC Vice Chair (Acting) Coal Policy Chair

Sr. VP Strategy & Public Policy
Arch Coal

Bill Brownell, Esquire Vice Chair Coal Policy

Chair, Hunton & Williams

Dan Roling, Finance Chair

CEO, NOVADX Ventures Corp.

Lisa J.N. Bradley, PhD, DABT Communications Chair

Vice President/Sr Toxicologist
Haley & Aldrich

Executive Committee Members

Shannon Banaga, Dir Fed Affairs

TECO Energy

George Duggan, VP Coal

BNSF Railway

Shelia Glesmann

SVP Enviro & External Affairs
ADA Carbon Solutions

Danny Gray

EVP Govt & Enviro Affairs
Charah LLC.

John Kennedy, VP & Gen Mgr

Dynegy

Todd Savage, EVP Group Leader

Savage Companies

Mike Sorensen, Sr. Mgr. Fuel

Tri-State G&T

Scott Teel, VP Fuel Services

Southern Company

Kemal Williamson

President Americas
Peabody Energy

Ex Officio

Joe Craft, III, President

Alliance Coal

Mike Durham, Principal

Soap Creek Energy

John Eaves, President & CEO

Arch Coal

Joe Hopf

Jeff Wallace, Director

CNX Coal Resources

NCC Staff/Support

Janet Gellici, NCC CEO

Hiranthe 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.

Kemal Williamson
Peabody Energy

Releases Corporate & Social Responsibility Report

<https://www.peabodyenergy.com/Sustainability/Corporate-Social-Responsibility-Report>

Peabody achieved the safest year in company history with a 1.22 total global reportable injury frequency rate/200,000 hours worked; became the first company in the industry to achieve independent certification under the U.S. National Mining Association's CORESafety® system; created US\$9.7 billion in direct and indirect economic benefits globally.

Rafic Minkara
Headwaters

Acquired by Boral Industries, Inc.

<http://boralamerica.com/Fly-Ash/About/fly-ash-news/boral-completes-acquisition-of-headwaters-incorporated>

In early May, Boral Industries completed its acquisition of Headwaters Inc., creating the leading building products and construction materials company in North American.

Vicky Sullivan
American Coalition for Clean Coal Electricity

<http://www.americaspower.org/wp-content/uploads/2017/05/ACCCE-statement-Office-of-Land-and-Emergency-Management-listening-session-May-9-2017.pdf>

Vicky Sullivan presented and filed comments at the EPA Office of Land Management Emergency Management Listening Session in response to Executive Order 13777 on regulatory reform.

NCC ASSOCIATES NEWS

Williamson College of the Trades

Introduction to Large Thermal Power Generation Plants

<https://www.williamson.edu/introduction-to-large-thermal-power-generation-plants/>

A 3-day continuing education course focused on large-scale steam generators. July 11-13 on Williamson's campus in Pennsylvania.

STORM TECHNOLOGIES

Large Electric Utility Boiler Optimization Seminar

<http://www.stormeng.com/short-courses/>

Storm Technologies is presenting its Utility Boiler Combustion & Performance Optimization Seminar on July 25-27 in Hilton Head, SC.

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

Bill in Ohio House would permanently subsidize 2 coal-fired power plants
[Columbus Dispatch](#)

Navajo Coal Plant Closure Could Cause 1,000 Jobs
[U.S. News & World Report](#)

EU pollutant limits threaten large coal power plants
[Reuters](#)

"Killing Coal Country" Now Available Online
["Killing Coal Country" Vimeo](#)

Could synfuels be new coal market?
[Coalfield Press](#)

BNSF appeals review of Longview coal terminal
[The Oregonian](#)

Coal projected to be largest source of power in AEAN by 2030
[Jakarta Post](#)

Coal power company to test new uses for carbon
[Bismarck Tribune](#)

Old Coal Mines Have a Place in the Future of Clean Energy
[Bloomberg](#)

National Coal Council
NationalCoalCouncil.org

NCC Member Focus

Dan Roling first served on the NCC beginning in 1994. He currently serves as Chair of the NCC Finance Committee and is a member of the NCC Executive Committee. Thank you for your service, Dan!

Daniel Roling is an accomplished senior executive with 35 years of global success in coal, non-ferrous metals, mining, steel and commodities. He leverages his extensive corporate finance and development experience to execute turnarounds and M&A transactions in successfully guiding companies through divestitures, IPOs, international expansions, debt refinancing and exit strategies.

Since 2011, Dan has held the positions of Chief Executive Officer and Chief Financial Officer with Lancaster Energy Partners, LLC. He has concurrently served as President & CEO with NOVADX Ventures Corp since 2012.

Prior to these roles, Dan served as President and CEO of National Coal Corp (2006 to 2010), which operated coal mines in Alabama, Kentucky and Tennessee.

From 1981 to 2006, Dan was employed with Merrill Lynch, starting out as a Junior Analyst and rising through the ranks to serve as First Vice President-Senior Metal & Mining Analyst with responsibility for building the global metals and mining team. During his tenure at Merrill Lynch, Dan established an Investor Conference with the aim of bringing together Presidents and CEOs of global metals and mining companies. The conference continues to this day and is ranked as the most recognized international conference in the investment community for metals and mining.

Dan is a former member of the Board of Directors of the National Mining Association. He has provided advisory and consultancy for multiple domestic and international entrepreneurial energy projects. He is a member of the American Institute of Certified Public Accountants, the CFA Institute and the New York Society of Security Analysts.

Dan has presented at numerous energy conferences and holds the distinction of ranking in Institutional Investor's All-American Research Team on 21 occasions.

Dan graduated from the University of Kansas with an MBA and attained his BBA in Accounting from Henry B Tippie College of Business, University of Iowa. He is a Certified Public Accountant and a Chartered Financial Analyst.



DANIEL A. ROLING
PRESIDENT & CEO
NOVADX VENTURES CORP

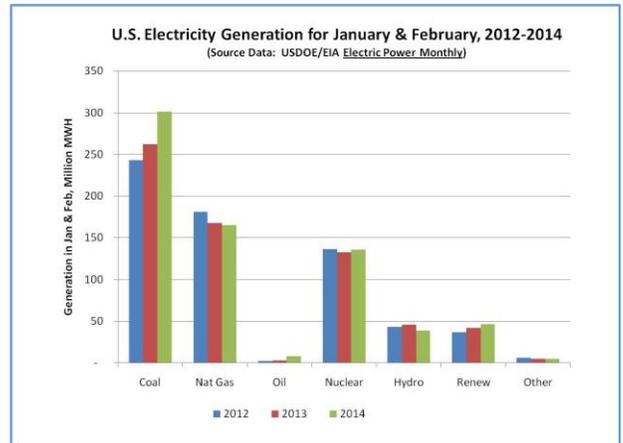
NovaDx Ventures Corp. is an investment company. The company provides capital investment, investment banking, financial and business advisory services to early-stage natural resource exploration companies, as well as fund administration services to investment funds and private clients. NovaDx has recently been engaged in financial oversight of a startup coal mining company in Central Appalachia.

Dan Roling
Knoxville, TN
(865) 323-2367
droling@gmail.com

Existing Coal Fleet (continued from page 1)

Diversity Matters (continued)

The Polar Vortex weather events of January/February 2014 demonstrated the contribution of the existing coal fleet – including units scheduled for retirement – to the reliability of the U.S. electric grid. The value of the existing coal fleet is not an abstract concept. At this time of great stress on power demand, coal produced 92% of the increase in U.S. electricity generation, relative to January/February 2013.



Existing Coal Infrastructure Delivers Security

The benefits derived from the existing coal fleet include the direct and macroeconomic benefit of low-cost electricity, the portfolio value of having a diverse mix of fuels and technologies for power generation, and the energy security value of a power option that is not dependent upon real-time fuel delivery and is relatively immune to purposeful attacks (terrorism).

Over the past 150 years, the U.S. has built a vast infrastructure for extracting, transporting and utilizing coal for electric power. The U.S. coal-fueled electricity generation supply chain is unmatched in the world.

Researchers at Penn State University estimated the U.S. coal power supply chain provides:

- Over \$1 trillion in gross economic output
- 7% of U.S. GDP
- 6.8 million jobs – 5% of the U.S. workforce
- \$362 billion in annual household income

In 2013, the U.S. coal supply chain included:

- 1,200+ coal mines
- 95,000 miles of Class 1 railroads
- 12,000 miles commercially navigable waterways
- 90,000 miners

Regulations Matter

News reports abound on the impact on coal generation of low natural gas prices and increasingly affordable renewable energy. A recent report entitled "[Can Coal Make A Comeback?](#)" attributes the decline in U.S. coal consumption and increase in coal power plant retirements to enhanced competition from cheap natural gas and renewable energy, as well as decreased demand for electric power. The authors claim that environmental regulations have played only a minor role in the switch from coal to natural gas and renewables by accelerating coal plant retirements.

The American Coalition for Clean Coal Electricity (ACCCE) has closely tracked the reasons for coal plant retirements over the past five years, concluding that environmental regulations have played a significant role in the vast majority of those retirements. In its assessment, ACCCE notes that 75,400 megawatts (MW) of coal generating capacity retired or switched fuel between 2010-2016; 51,000 MW (68%) of retired or converted coal generation is attributable to EPA policies.

[ACCCE Assessment of Coal Plant Retirements](#)



Existing Coal Fleet

Regulations Matter (continued)

A 2013 Duke University study on "[Fuel Prices, Emission Standards and Generation Costs for Coal vs. Natural Gas Power Plants](#)" also affirmed the impact of regulation on coal power plants. The authors note that "... that economic viability of 9% of current coal capacity is challenged by low natural gas prices, while another 56% would be challenged by [the] stricter emission regulations."

Leveling the Playing Field

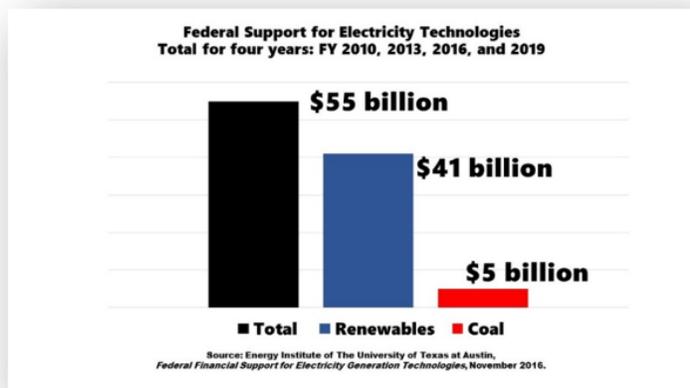
In November 2015, NCC released a report entitled "[Leveling the Playing Field: Policy Parity CCS Technologies](#)" in which it documented that federal energy and environmental policy has severely tilted the energy playing field, most notably in favor of renewable energy. Regulatory policies and financial/tax incentives have advanced renewable energy technologies and market penetration, to the detriment of other fuel sources.

"The subsidy for electricity from renewables is so large that it has enabled renewable energy producers to sell into energy markets at a negative price, which in deregulated markets can have the effect of reducing market prices to non-subsidized fuels, i.e., fossil and nuclear."
NCC Policy Parity Report

In a recent editorial for [Real Clear Energy](#), Texas Congressman Lamar Smith cited data from the Energy Information Administration (EIA) documenting that federal tax credits and subsidies for renewable energy increased by 54% between 2010 and 2013 while support for fossil and nuclear energy declined. In March, the Congressional Budget Office (CBO) [testified](#) before Congress that approximately \$10.9 billion (59%) of federal energy tax preferences went to renewable energy while only \$4.6 billion (25%) went to fossil fuels (coal, oil, natural gas). Congressman Smith also noted that the Department of Energy has issued more than \$30 billion in loans and loan guarantees and "not a single loan has been issued for fossil energy technology."

A recent report out of the University of Texas at Austin on "[Federal Financial Support for Electricity Generation Technologies](#)" notes that for the years 2010, 2013, 2016 and 2019, federal support for all electricity technologies totaled \$55 billion with renewables receiving 75% of the total compared to less than 10% for coal.

The NCC's Policy Parity report details specific regulatory and financial incentives that would level the playing field for coal technologies. These measures would support the continued operation of reliable, secure and affordable energy from our nation's existing coal fleet and help incentivize the deployment of technologies and infrastructure in the future that would continue to secure the role of the U.S. as the global energy leader.





NCC ACTIVITIES & NEWS

NCC UPCOMING SPEAKING ENGAGEMENTS



Upcoming presentations by NCC CEO Janet Gellici

- ~ **Council of Industrial Boiler Owners** – June 2017, Arlington, Virginia
- ~ **The Coal Institute** – July 2017, Myrtle Beach, South Carolina
- ~ **Carbon Management Technology Conference** – July 2017, Houston

THANK YOU! CHAIR'S LEADERSHIP COUNCIL MEMBERS



Duly Noted ~ Out of Wind

Renewable energy underwriter, GCube Underwriting Ltd. cautions that resource risk ~ a lack of wind or low wind speeds ~ will be the most pressing concern for the wind energy sector "for a number of years." Low wind speeds are reportedly hurting the performance of wind farms in numerous markets. In fact, resource risk has now surpassed mechanical and electrical breakdowns as the top potential cause of financial loss.

<https://renewablesnow.com/news/resource-risk-to-remain-biggest-threat-for-wind-sector-gcube-569816/>



News Worthy from the Department of Energy



Work on DOE Study on Electricity Markets & Reliability Advancing

https://s3.amazonaws.com/dive_static/paychek/energy_memo.pdf

On April 14th, Energy Secretary Perry issued a directive to DOE staff in which he requested they undertake a study to explore critical issues central to protecting the long-term liability of the electric grid. The analysis, to be completed in 60 days, is intended to explore the following issues:

- The evolution of wholesale electricity markets, including the extent to which federal policy interventions and the changing nature of the electricity fuel mix are challenging the original policy assumptions that shaped the creation of those markets.
- Whether wholesale energy and capacity markets are adequately compensating attributes such as on-site fuel supply and other factors that strengthen grid resilience and, if not, the extent to which this could affect grid reliability and resilience in the future.
- The extent to which continued regulatory burdens, as well as mandates and tax and subsidy policies are responsible for forcing the premature retirement of baseload power plants.

DOE announced that Alison Silverstein, an independent energy consultant, will write the final report. Silverstein is President of the Board of the American Council for an Energy-Efficient Economy.

<http://aceee.org/about/board-directors/alison-silverstein>

DOE Seeks Comments on Regulatory Reform

<https://www.federalregister.gov/documents/2017/05/30/2017-10866/reducing-regulation-and-controlling-regulatory-costs>

As part of its implementation of Executive Order 13771, "Reducing Regulation and Controlling Regulatory Costs," issued by President Trump on January 30th, 2017, DOE is seeking comments and information to assist the Agency in identifying existing regulations, paperwork requirements and other regulatory obligations that can be modified or repealed to achieve meaningful burden reduction.

Written comments are due before July 17, 2017 via mail, email or a special Federal rulemaking portal. Details on submissions opportunities are available through the above-referenced Federal Register notice.

New Infographic on DOE Web Site

<https://energy.gov/fe/downloads/infographic-6-things-you-may-not-know-about-coal>



More News Worthy from the Department of Energy

President's FY2018 Budget Includes \$479.8 Million for Fossil Energy Programs

<https://energy.gov/fe/articles/president-s-fy-2018-budget-includes-4798-million-fossil-energy-programs>



On May 23rd, Energy Secretary Perry released the following statement regarding President Trump's FY2018 budget request for DOE:

"This budget delivers on the promise to reprioritize spending in order to carry out DOE's core functions efficiently and effectively while also being fiscally responsible and respectful to the American taxpayer. It reflects the importance of strengthening our nuclear capabilities, and places an emphasis on early state energy technology research and development. As we refocus resources, we will continue to utilize our national laboratories for cutting edge science in order to improve both our energy and national security. I look forward to working with Congress as the budget process moves forward."

The proposed budget seeks \$479.8 million for the Office of Fossil Energy, most notably \$280 million for fossil energy research and development – including programs for carbon capture and storage (CCS) and unconventional fossil energy technologies, as well as funding for NETL's operations and R&D.

More details on the DOE FY2018 Budget Request may be accessed at <https://energy.gov/cfo/downloads/fy-2018-budget-justification>.

Vice President Mike Pence says 'War on Coal' is Over

<http://www.countoncoal.org/2017/05/16/vp-mike-pence-says-war-coal-visit-crow-coal-mine/>



After touring a Crow Indian mine on horseback and meeting with stakeholders in Montana, Vice President Pence declared the "the war on coal is over." The Vice President met with Crow tribal leaders and coal supporters at Absaloka Mine's headquarters on the Crow Reservation in mid-May. The mine is operated by Westmoreland Coal.

News Worthy from Environmental Protection Agency



EPA Seeking Nominations for Board of Scientific Counselors

<https://www.epa.gov/bosc/invitation-nominations-bosc-executive-committee-and-subcommittees>

The Environmental Protection Agency (EPA) is seeking nominations for technical experts to serve on its Board of Scientific Counselors (BOSC), a federal advisory committee to the Office of Research and Development. Nominations should be submitted by June 30th, 2017.

EPA Signs Off on North Dakota Regulation of CO₂ Wells

<https://www.usnews.com/news/best-states/north-dakota/articles/2017-05-09/epa-signs-off-on-north-dakota-regulation-of-co2-wells>

In mid-May, EPA signed off on a proposal to provide the State of North Dakota with the power to regulate underground wells used for long-term storage of CO₂ captured from industrial/power sources. North Dakota is the first state to attain such authority which will be granted pending a 60-day public comment period following publication of a posting in the Federal Register.

EPA's Pruitt Notes Coal is Needed for Electric Grid Reliability

<http://thehill.com/policy/energy-environment/331819-epa-chief-us-needs-coal-to-protect-electric-grid>

Speaking on Fox Business's "Varney & Co.," EPA Administrator Scott Pruitt argued for the need for coal to maintain the reliability of the electric grid, citing over-reliance on natural gas and cybersecurity concerns.

News Worthy from the Administration & Congress

Congressmen Outline Energy Goals

<http://www.washingtontimes.com/news/2017/may/1/energy-goals-jobs-production-modern-infrastructure/>

In a Washington Times editorial, Congressmen Greg Walden (OR), Fred Upton (MI) and John Shimkus (IL) outlined energy policy objectives that include jobs, production, modern infrastructure and environmental stewardship. Advocating for an all-of-the-above approach to energy policy, the Congressmen noted that U.S. needs to work to capitalize on its energy abundance.



Former Congresswoman Lummis Says War on Coal is Not Over

<http://thehill.com/blogs/pundits-blog/energy-environment/331372-despite-a-battle-won-war-on-coal-far-from-over>

Cynthia Lummis, former Wyoming Congressional representative, notes that while a battle may have been won with President Trump's Energy Executive Order, the war on coal is far from over. Lummis contends that repealing burdensome regulations alone will not ensure the long-term viability of coal and that years of energy policies that have manipulated markets is not something that can be fixed overnight.

WHO KNEW?*

National Institute of Clean and Low-Carbon Energy

<http://www.nicenergy.com/en/>

The National Institute of Clean and Low-Carbon Energy (NICE) was established in December 2009 as an R&D institute affiliated with Shenhua Group, China's leading state-owned mining and energy company. NICE is focused on the strategic goal of making Shenhua Group an international renowned clean energy supplier and solution provider.

NICE is dedicated to the development of low carbon and clean energy technologies and has been working on innovative technologies to support the core business of Shenhua. Since its inception, NICE has been gathering a well-structured talent pool of experts in various research fields, including more than 300 staff with Ph.D.'s and master's degree.

NICE has carried out R&D and innovation in the fields of green coal, function materials and new energy and environmental projects.

NICE includes among its many partners the Pacific Northwest National Laboratory, Jacobs Consultancy, GE and the University of Pittsburgh, as well as many China-based universities and chemical and technology institutes.

R&D focus areas include:

- Clean Coal Conversion & Utilization
- Coal-derived Performance Materials
- Hydrogen Energy & Utilization
- Water Treatment
- Distributed Energy
- Catalysis

NICE President & CEO, Wei Chang notes that NICE is committed to technology innovation and talent development.

北京低碳
清洁能源
研究所



NATIONAL
INSTITUTE
OF CLEAN
AND-LOW
CARBON
ENERGY

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