

Issue 4, 2022

Coal Energy

FROM THE MINE TO THE UTILITY

COAL'S CONTRIBUTION TO ENERGY SECURITY

**COAL REMAINS
PRIMARY
ENERGY
SOURCE FOR
15 STATES**

**WCA'S MICHELLE
MANOOK
RECOGNIZED AS
INSPIRATIONAL
WOMAN IN MINING**

TABLE OF CONTENTS



FEATURES:

- 06 **Now is the time to recognize the contribution of coal and nuclear power to energy security**

DEPARTMENTS:

- 25 **World News:** After 8 years, Pakur mine sends coal to Punjab
- 26 **World News:** Nova scotia renews approval for Donkin mine
- 27 **Industry Trends:** Cold, Dark And Expensive
- 38 **Getting Technical:** Identifying and addressing conveyor idler issues

IN EVERY ISSUE:

- | | |
|----------------------------|-------------------------|
| 04 Association Comparisons | 43 Index to Advertisers |
| 08 In the Press | 42 Industry Events |
| 30 Association Members | |

Martonick Publications, Inc.
PO Box 244322
Boynton Beach, FL 33424

Toll Free Phone: (866) 387-0967
Toll Free Fax: (866) 458-6557

info@martonickpublications.com
www.martonickpublications.com
www.coalenergyonline.com

President:
Maria Martonick

Vice President:
Jenna Lynn

Managing Editor:
A.J. Raleigh

Research Coordinator:
Vivian Mofeed

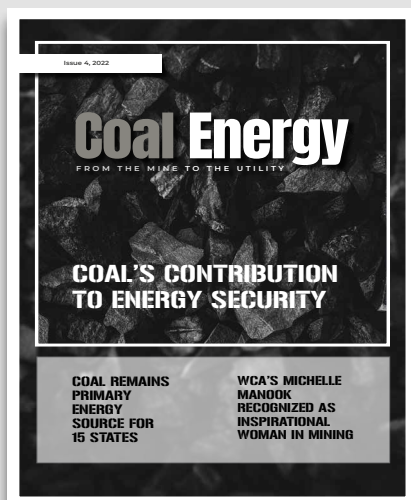
Contributing Writers:
Maria Martonick, Mathew Kandrach, Stacy MacIntyre, Erin Douglas, Matthew Gerber, Catie Kerns, Julie Gates, Alice Tharenos, Michelle Manook, Christopher Demetriou, Alexey Danilov, Todd Swinderman, Barry Butterfield, Will Owen, Joe Toft, Ken Roberts, Conor Bernstein, Jim Constantopoulos.

Graphic Designer:
Abdalla Mansour

THE OPINIONS EXPRESSED BY THE AUTHORS OF THE ARTICLES CONTAINED IN COAL ENERGY ARE THOSE OF THE RESPECTIVE AUTHORS, AND DO NOT NECESSARILY REPRESENT THE OPINION OF THE PUBLISHER.

© COPYRIGHT 2022

LETTER FROM THE PUBLISHER



Dear readers,
Welcome to Issue 4, 2022 of **Coal Energy**.

In this issue, we take focus on why now is the time to recognize the contribution of coal to energy security. According to NERC, the premature retirements of baseload power plants have seriously impacted grid resilience and reliability. As many as 40 coal plants that were slated for closure over the next year will remain on line.

Supporting the industry trend, we hear Conor Bernstein's perspective on America's energy future. Poor planning and irresponsible policy have erased critically important fuel diversity amid a global energy crisis.

In every issue, **Coal Energy** includes a world news piece to bring the reader up to date on import/export and investment news around the globe. In this edition we share the resumption of the Pakur mine sending coal to Punjab after eight years of being grounded and Nova Scotia's seven year approval for the Donkin Mine.

Coal Energy remains proud to

be the source journal for information about coal related associations in the industry. We currently provide information at your fingertips on different groups to benefit your companies' needs and targets. By providing information at a glance on each group, and including current member lists, your company can analyze the forums available to market, promote, and lobby for America's future regarding coal energy.

Coal Energy is also proud to be able to provide quick news updates gathered from various sources to create an easy wealth of industry information at the click of a button. From newly released equipment, to quarterly finance news, you can easily review important industry happenings in our press release department.

Please visit our website, www.coalenergyonline.com, for current and prior editions of **Coal Energy**.

You can also like and share our facebook page (www.facebook.com/coalenergyonline) created to network with the nations promoters of coal, suppliers of coal, and to serve as a public interface for the image of coal energy.

With the ongoing trend and convenience of electronic publications, we are pleased to inform you our online readership is increasing daily. To be added to our digital delivery database, please send an email to info@martonickpublications.com with your subject as Digital Delivery. We are proud to announce that our facebook page now has

a weekly reach of over 5,000 contacts and is liked by 1,700 individuals and companies who support coal and coal energy. We extend a warm appreciation to our supporting advertisers, please support them as they make the publication you are reading possible. If your target market spans across to members of more than one coal association, then **Coal Energy** is the place for you to represent your company. Please contact our advertising sales representatives should you require additional information at info@martonickpublications.com. And again, thank you for picking up, or clicking on, another edition of **Coal Energy**.

If you have any questions, editorial submissions, advertising interest or just comments about **Coal Energy** please feel free to email me directly at maria@martonickpublications.com.

Warmest regards,

Maria Martonick
President
Martonick Publications, Inc.



Association Comparisons



<https://www.nma.org>

THE NATIONAL MINING ASSOCIATION

Mission:

NMA's mission is to build support for public policies that will help Americans fully and responsibly benefit from our abundant domestic coal and mineral resources.

Our objective is to engage in and influence the public process on the most significant and timely issues that impact mining's ability to safely and sustainably locate, permit, mine, transport and utilize the nation's vast resources.

NMA serves its membership by:

- Promoting the safe production and use of coal and mineral resources
- Establishing a strong political presence in the Nation's Capital
- Serving as the information center for and a single voice of U.S. mining
- Addressing the current and future policy needs of U.S. mining, mining equipment manufacturers and support services members of NMA



<https://www.movecoal.org/>

NATIONAL COAL TRANSPORTATION ASSOCIATION

Mission:

To promote the safe, economical, and reliable transport of coal by facilitating communication among coal transport, allied industries and associations to maximize sharing of best practices to serve the needs of industry and the public.



<https://WWW.ASRS.US>

AMERICAN SOCIETY OF RECLAMATION SCIENCES

Mission:

ASRS's mission is to represent and serve a diverse international community of scientists, practitioners, private industry, technicians, educators, planners, and government regulators involved in mineral extraction and disturbed ecosystem reclamation.

ASRS promotes the advancement of basic and applied reclamation science through research and technology transfer in the Society's annual meetings, workshops, published proceedings, newsletters, Reclamation Matters publication, Reclamation Sciences, and the ASRS website.



WWW.ACAAMEMBERS.ACAA-USA.ORG

AMERICAN COAL ASH ASSOCIATION

Mission:

The ACAA advances the management and use of coal combustion products in ways that are environmentally responsible, technically sound, commercially competitive and more supportive of a sustainable global community.



<https://www.americancoalcouncil.org>

AMERICAN COAL COUNCIL

Mission:

American Coal Council (ACC) provides relevant educational programs, market intelligence, advocacy support and peer-to-peer networking forums to advance members' commercial and professional development interests.

ACC represents the collective interests of the American coal industry ~ from the hole-in-the-ground to the plug-in-the-wall ~ in advocating for coal as an economic, abundant and environmentally sound fuel source ACC serves as an essential resource for industry, policy makers and public interest groups.

The Association supports activities and objectives that advance coal supply, consumption, transportation and trading.



<https://www.worldcoal.org>

WORLD COAL ASSOCIATION

Mission:

The World Coal Association is a global industry association comprising the major international coal producers and stakeholders. WCA works to demonstrate and gain acceptance for the fundamental role coal plays in achieving a sustainable and lower carbon energy future. Membership is open to companies and not-for-profit organizations with a stake in the future of coal from anywhere in the world, with member companies represented at Chief Executive level.

WCA is the global network for the coal industry.



<https://www.rmел.org>

RMEL

Mission:

RMEL, through its diverse membership, educational events, and programs, facilitates the discovery of solutions and strategies for vital issues facing the electric utility industry.

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Now is the time to recognize the contribution of coal and nuclear power to energy security

By: Barry Butterfield

As freezing weather sets in, is there any doubt that few things are more important than heat and light? In Nebraska, we've enjoyed the benefits from abundant energy production for so long that we've taken them for granted. But the need for a secure supply of electricity has reminded us that maintaining power reliability is never simple. The North American Electric Reliability Corporation (NERC), which monitors the electricity system, recently warned that a

large portion of North America is at risk of insufficient electricity supplies during peak winter weather and that "energy emergencies are likely in extreme conditions." NERC said power reserve margins in the region monitored by the Midcontinent Independent System Operator (MISO) have declined 5% since last winter as the loss of power due to power plant retirements has exceeded replacement capacity. In fact, hundreds of coal plants across the country have been closed in the

past decade. And more losses are expected. Half of the Midwest's coal fleet — 27,000 megawatts — is set to be shuttered by 2030, and forthcoming EPA regulations could push coal plant retirements even higher. At an auction of wholesale electricity, there was an alarming fiftyfold increase in Midwest power capacity prices from a year ago.

Nebraska relies mainly on coal for electricity production — about 48% of capacity compared to a national average of 20%, along with wind at 25%, nuclear power 18% and natural gas 4%. The big question is whether Nebraska will run its coal plants around the clock or only occasionally, as a backup for wind power. Some have argued that the Midwest's future power needs can be satisfied largely through wind and solar. President Joe Biden even went so far as to say that the nation's fleet of coal plants should be shut down and replaced by wind and solar power. But even under the most optimistic assessment of renewables, the Midwest will continue to rely on base-load power from coal and nuclear energy. To do otherwise would wreck the reliability of the electricity system, plunging the Midwest into power

blackouts, industrial shutdowns and energy insecurity. The danger is that concerns about climate change will lead to missteps. According to NERC, the premature retirements of baseload power plants, combined with the intermittency of wind and solar, have seriously impaired grid resilience and reliability. Fortunately, electric utilities are aware of the problem and have taken steps to delay coal plant retirements until replacement power becomes available. As many as 40 coal plants that were slated for closure over the next year will remain on line for up to five years (including the North Omaha Station). Meanwhile, the federal government has earmarked funds to keep emission-free nuclear plants operating. What is important about this is that cooler heads are prevailing in the debate over climate change. In energy policy circles, there is a growing sense that we need a commitment to stay the course and not let changing national priorities divert us from paying attention to the need for a stable and secure energy supply.



UTTER CONSTRUCTION, INC.

Safely Supporting Power Generation

Ash Pond Closures

Landfill Construction & Development

Waste Pond Dredging & Maintenance

Landfill Operations & Maintenance

**Material Processing & Dewatering
Techniques**

Environmental Maintenance

Material Handling & Transportation

Civil Site Development & Earthwork

Commercial Scaffolding & Carpentry

Miscellaneous Concrete Services

Pipe System Installations



**1302 State Route 133
Bethel, Ohio 45106**

**Office: (513) 876-2246
Fax: (513) 876-3626**

www.utterconstruction.net



CONSOL Energy announces results for 3Q22

BY: Will Owen

CONSOL Energy Inc. has reported its financial and operating results for the quarter (3Q22) ended 30 September 2022.

Highlights

- GAAP net income of US\$152.1 million.
- Quarterly adjusted EBITDA of US\$180.9 million.
- Announces dividend of US\$1.05/share, based on 3Q22 results, payable on 23 November 2022.
- Itmann preparation plant commissioned in late September, with first train shipped on 12 October.
- Net cash provided by operating activities of US\$153.1 million.
- Quarterly free cash flow of US\$107.1 million.
- 2023 and 2024 contracted position improved to 21.8 million t and 8.8 million t, respectively.
- Debt repayments of US\$56.3 million during 3Q22, including US\$50.0 million of Term Loan B.

Management comments

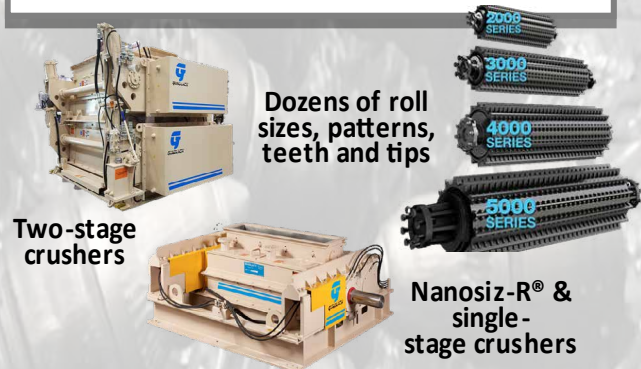
"During 3Q22, we generated US\$107 million in free cash flow, despite the Pennsylvania Mining Complex having a planned maintenance shutdown and longwall move and encountering some operational issues, which limited production to 5.3 million t. Due to this strong free cash flow generation, we were once again able to retire a significant amount of our outstanding debt while returning US\$35 million of cash to our shareholders during the quarter. Capitalising on the ongoing coal market strength, we opportunistically contracted an additional 6.0 million t of new business during the third quarter for delivery through 2026 at attractive prices. Furthermore, we continue to target operation of the fifth longwall at the Pennsylvania Mining Complex by the end of 4Q22, which will give us upside potential and optionality in 2023 and beyond. Finally, our Itmann preparation plant was commissioned and processed its first coal in late September with the first train subsequently shipping in mid-October. This puts us on track to have a full year of production from the Itmann Mine starting next year, which diversifies our revenue mix and adds further upside potential to 2023 and beyond."

"On the safety front, our Enlow Fork Mine, Harvey Mine, Bailey Preparation Plant and CONSOL Marine Terminal (CMT) each had ZERO employee recordable incidents during 3Q22. The Bailey Preparation Plant and CMT have maintained ZERO employee recordable incidents thus far in 2022, while the Enlow Fork Mine recently completed its second consecutive quarter at that mark. Our 3Q22 total recordable incident rate of 0.99 at the Pennsylvania Mining Complex continued to track significantly below the national average for underground bituminous coal mines."



The most durable, cost-effective and high-performance CRUSHING & FEEDING SOLUTIONS!

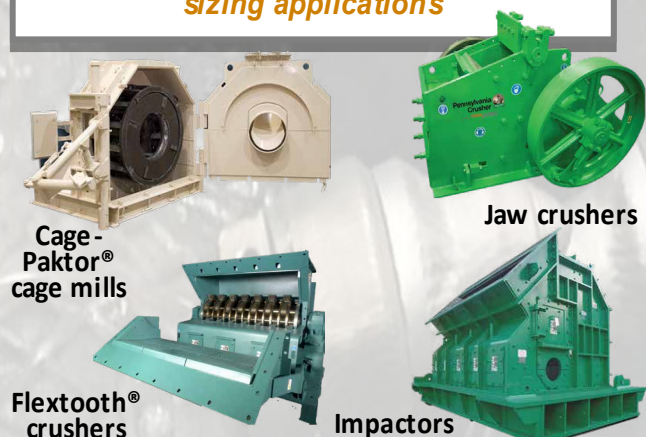
Wide range of roll crusher configurations and roll sizes for precise, efficient sizing



Durable, innovative feeders for consistent, controlled material flow



Full array of hammermills, impactors, jaw crushers and cage mills for toughest sizing applications



Industry-leading equipment

+ Extended-wear OEM parts

+ Extensive application expertise

+ Innovative testing facility

...equals the right partner. Let us help improve your operation!

1-855-483-7721

info@terrasource.com

www.terrasource.com

Alliance Resource Partners reports record coal sales prices and revenues



Alliance Resource Partners, L.P. has reported substantial increases to financial and operating results for the quarter ended 30 September 2022 compared to the quarter ended 30 September 2021. Total revenues in the 2022 quarter increased 51.3% to a record US\$628.4 million, compared to US\$415.4 million for the 2021 quarter, as a result of significantly higher coal sales revenues, which rose US\$188.3 million to US\$550.6 million, and oil & gas royalties revenues, which jumped 75.6% to US\$35.3 million. Coal sales revenues increased on the strength of record coal sales prices, which rose 40.5% in the 2022 quarter to US\$59.94/t sold, and increased coal sales volumes, which were 8.1% higher compared to the 2021 quarter. Oil & gas royalties revenue in the 2022 quarter benefited from significantly higher volumes and sales price realisations per BOE, which increased 33.1% and 31.6%, respectively, compared to the 2021 quarter. Total operating expenses increased to US\$450.3 million in the 2022 quarter, compared to US\$348.7 million in the 2021 quarter, due primarily to increased coal sales volumes and ongoing inflationary cost pressures. Net income for the 2022 quarter increased 186.0% to US\$164.6 million,

or US\$1.25 per basic and diluted limited partner unit, compared to US\$57.5 million, or US\$0.44 per basic and diluted limited partner unit, for the 2021 quarter. EBITDA also increased 84.0% in the 2022 quarter to US\$250.2 million compared to US\$135.9 million in the 2021 quarter. Performance in the 2022 quarter also improved compared to the quarter ended 30 June 2022 as modest increases to coal sales volumes and pricing pushed both coal sales and total revenues higher by 3.5% and 1.9%, respectively. Increased revenues, partially offset by higher total operating expenses in the 2022 quarter, led net income and EBITDA higher by 1.9% and 2.6%, respectively, both as compared to the sequential quarter. Total revenues increased 55.6% to US\$1.71 billion for the nine months ended 30 September 2022, compared to US\$1.10 billion for the nine months ended 30 September 2021, primarily due to substantial increases in prices and volumes from both coal and oil & gas royalties. Higher revenues, partially offset by increased total operating and income tax expenses, led to significantly higher net income, which rose 187.1% to US\$362.7 million for the 2022 period, or US\$2.76 per basic and diluted limited partner unit, compared to US\$126.3 million, or US\$0.97 per



~ Formerly L.C. Vought Co. ~

Obsolete Rock Drill Parts & more

Ingersoll-Rand, Gardner Denver, Ripamonti,
WOLF & more
Drill Masts, Drilling Machines, Drifters,
Motors, & Parts

Jennifer & Alex Patterson
Carolinadrillsupply.com
970-858-3799

basic and diluted limited partner unit, for the 2021 Period. EBITDA increased 85.3% in the 2022 Period to US\$646.3 million compared to US\$348.9 million in the 2021 Period.

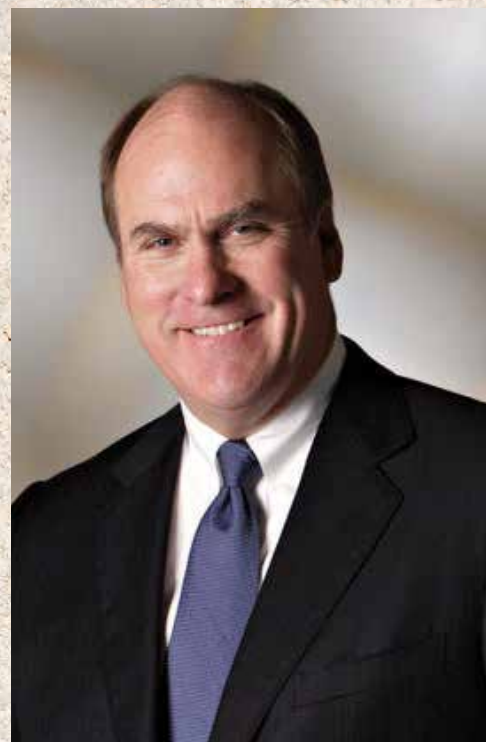
The Board of Directors of ARLP's general partner increased the cash distribution to unitholders for the 2022 quarter to US\$0.50 per unit (an annualised rate of US\$2.00 per unit), payable on 14 November 2022, to all unitholders of record as of the close of trading on 7 November 2022. The announced distribution represents a 150.0% increase over the cash distribution of US\$0.20 per unit for the 2021 quarter and a 25.0% increase over the cash distribution of US\$0.40 per unit for the Sequential quarter.

Joseph W. Craft III, Chairman, President and Chief Executive Officer, comments:

"With energy market fundamentals remaining favourable during the 2022 quarter, ARLP again delivered strong financial and operating performance, as we posted record quarterly total revenues and income from operations as well as significant increases to net income and EBITDA compared to the 2021 quarter.

"Higher coal sales and production volumes combined with record per ton price realizations drove our total Coal Segment Adjusted EBITDA up 77.8% to US\$224.6 million as margins per tonne sold jumped US\$9.58 compared to the 2021 quarter. Strong energy markets also continued to benefit our royalty businesses as increased volumes and commodity price realisations led to increased total royalty revenue and record Segment Adjusted EBITDA during the 2022 quarter.

"ARLP was also able to execute new coal sales commitments for delivery of 5.6 million t through 2025 at prices supporting higher margins in the future. With ARLP sold out for this year and solid contracted coal sales volumes in 2023 and 2024, we have good visibility into our ability to generate cash flow growth over the next several years. Reflecting our strong year-to-date performance and future expectations, ARLP's Board elected to accelerate our previously planned increases to cash distributions to unitholders by declaring a US\$0.50 per unit distribution for the 2022 quarter, as communicated last week."



Joseph W. Craft III, Chairman, President and Chief Executive Officer of Alliance Resource Partners L.P.

CTL

CONSOLIDATED TERMINALS AND LOGISTICS CO.

Invest with the **BEST**
CTL for your **inbound** and **outbound** **COAL SHIPMENTS**

Contact: **Tom Torretti** - P: 314.835.9332 - Email: Tom.Torretti@cgb.com A Division of **CS** Enterprises, Inc.

www.ctlonline.com

CELEBRATING MINERS AND THEIR DETERMINATION



On December 6th 2022, the U.S. celebrated National Miner's Day. *Coal Energy* honors the legacy and contributions of miners worldwide. Their skill, determination and hard work provide the raw materials that allow society to advance. Most people today have no idea how metals are smelted or the source of their electricity. This is a testament to the miners that go quietly about their business.

The U.S. Congress proclaimed December 6th as National Miner's Day in 2009. It marks the anniversary of the 1907 Monogah mining disaster where 362 coal miners perished in West Virginia. Congress designated the national holiday **"in appreciation, honor, and remembrance of the accomplishments and sacrifices of the miners of the nation."**

We join in the celebration of miners and pray for the protection of miners from accidental death and injury so that every miner returns home safely every day.

Railcar Repair



Wheelset Services



Tank Car Repair



Bearings



PROGRESS
RAIL SERVICES

Wheels



Locomotive Parts & Repair



Railcar Parts



Our integrated products and services, combined with our strategically located facilities, set us apart in the industry. Call us today and put the power of Progress to work for you.

800-476-8769

www.progressrail.com



IN REMEMBRANCE OF FRANK CALANDA, JR.

Frank Calandra, Jr. (84) passed away on Friday, September 16, 2022. In 1972, Frank and his brother Jack Calandra founded Jennmar Corp. and aggressively began to reshape production and safety methods in underground mining. Frank's work ethic was forged by his time spent in the army and learning from his parents in the steel mills collecting scrap during his childhood. Frank was president at Jennmar from 1972 until 2018. During his tenure at Jennmar, there was a direct correlation in reducing underground fatal mine injuries from 150 a year in 1972 to under 5 a year by 2018. He is responsible for creating over 20 patents in roof control design for underground mining, and his companies are associated with well over 100 additional patents. Many lives were saved and improved because of his hard work and devotion as President of Jennmar for 46

years. His favorite mottos were, **"If you think you did good, do better!"** and **"Treat your customers like you would treat a friend."** Frank was inducted into the National Coal Mining Hall of Fame in 2019. He also served as a board member for the National Mining Association. A perfect day for Frank included taking his children to school in the morning and working 8 to 12 hours a day at the office with his esteemed co-workers at Jennmar. He would always end the day at the kitchen table with his wife and children. Frank was an avid golfer. He was admired and respected for his overwhelming generosity and philanthropic efforts. Some of his favorite charities were Family House, Children's Hospital, and the Marine Corps Scholarship Foundation.

The best coal cars come from FreightCar America.

FreightCar America is the world's leading coal car builder for good reason. Its BethGon® II gondola car and AutoFlood III™ automatic discharge hopper car are the standards of the industry.

No one builds more aluminum, steel, and stainless steel coal cars than FreightCar America. That should come as no surprise - FreightCar America and its predecessor companies have been at it for 105 years!

In addition to coal cars, FreightCar America builds flat cars, mill gondolas, intermodal cars, coil steel cars, covered hopper cars and AVC Aluminum Vehicle Carriers.

Contact your friends at FreightCar America to find out more about the best freight cars, produced by America's most innovative railcar builder.



**FreightCar
America**

We are America's freight car builder.

Two North Riverside Plaza
Suite 1250
Chicago, IL 60606

800-458-2235

www.freightcaramerica.com



COAL REMAINS PRIMARY SOURCE OF ENERGY GENERATION FOR 15 US STATES

By: Joe Toft

In 15 US states last year, coal was used to generate electricity more than any other energy source. Twenty years earlier, in 2001, coal was the largest source of electricity generation in 32 states. The United States has shifted away from coal-fired generation since it peaked in 2007 and toward natural gas and renewables.

In 2001, natural gas was the largest source of in-state electricity generation in seven states. By 2021, that number had grown to 23 states, driven by widespread retirement of coal-fired power plants and new construction of natural gas-fired power plants. Wind and solar capacity were also growing during that time. Coal-fired plants have not been competitive economically with relatively lower-cost natural gas and renewables. Many of the country's coal plants were built in the 1970s and 1980s. As coal plants aged and faced price pressure from natural gas and renewables and from emissions regulations, many have been closed. Ohio and Pennsylvania had the largest

declines in coal-fired capacity over the past 20 years; the largest source of electricity in both states shifted from coal to natural gas over that period.

As coal plants retired, significant natural gas-fired and renewable capacity, including wind and solar, was added. Technological advancements—namely horizontal drilling and hydraulic fracking—led to a rise in US natural gas production. Low natural gas prices helped make natural gas-fired power plants an attractive alternative to coal. Texas, Florida, California, Pennsylvania, and Ohio added the most natural gas-fired capacity between 2001 and 2021. In 2021, natural gas accounted for the largest

share of in-state generation in all five states.

In three states – Iowa, Kansas, and South Dakota – where coal-fired plants generated the most electricity in 2001, the largest shares of electricity generation shifted to wind turbines by 2021. All three states are located in the blustery Great Plains, where the country's most abundant onshore wind resources are located. Although many states have shifted away from coal as the largest source of electricity over the past 20 years, in 2021, coal still accounted for more than 70% of in-state generation in four states: West Virginia (91%), Missouri (75%), Wyoming (74%), and Kentucky (71%). Three of

these states (West Virginia, Wyoming, and Kentucky) are among the nation's largest coal producers. A state's total electricity supply is made up of both electricity generated in the state as well as electricity imported from other states as well as Canada and Mexico. For example, in 2021, California imported about 30% of its total electricity supply, according to the California Energy Commission. The fuel shares discussed in this article are only for in-state electricity generation.



**Airport Runways
Housing Subdivisions
Interstate Highways
State Highways
County Roads
State Parks
Parking Lots
Feedlot Pads
Pond & Lake Floors**



**Leading The Industry In Soil Stabilization
& Quick Setting Flowable Fill**



**Asphalt Pulverization • Cement • Class C Fly Ash •
Full Depth Reclamation • Lime • Flash Fill**

20011 Cty Rd 13
PO Box 1449
Fort Morgan, CO 80701
970.867-4401
www.flashfill.net
www.son-haul.com

SONFILL_{LLC}

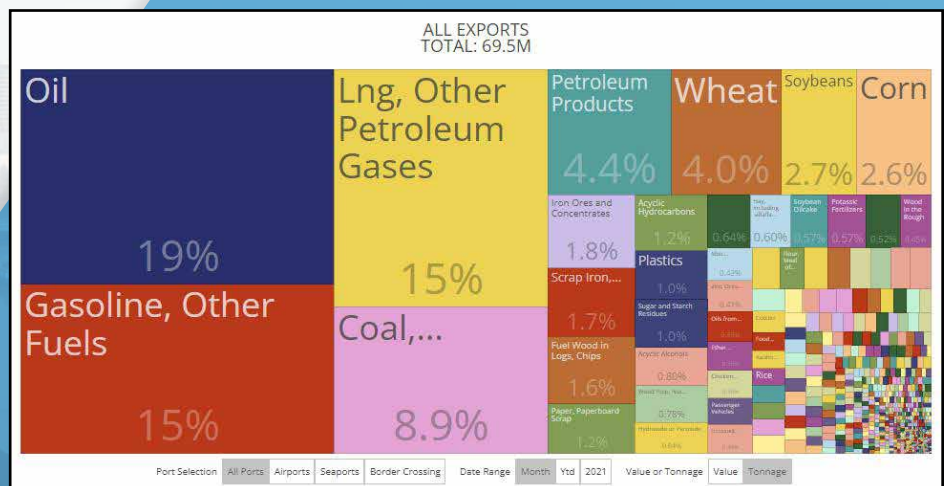
U.S. Coal Exports to Europe Up 46% By Weight, 184% By Value

By: Ken Roberts

Europe is buying almost 50% more U.S. coal as winter approaches and the Russian invasion of Ukraine drags on, increasing the percentage of U.S. coal shipped to Europe to the highest level since 2016. The overall value of U.S. coal exports to Europe has risen significantly more, up 184.21%, according to the latest Census Bureau data. That's the effect of increasing volume at the same time prices are increasing rapidly. While the price increase is affecting all regions of the world fairly equally, Europe is paying its additional cost as it faces a shortage of heating fuel. Its traditional source — Russian natural gas — is very much in doubt as Russia retaliates for European and U.S. sanctions over Ukraine.

Increasing even more sharply by volume are U.S. shipments of liquid natural gas to Europe, the highly concentrated form of natural gas, as I have written previously.

While LNG and natural gas are seen as "clean," or as least cleaner, energy sources, coal is largely seen as an energy source with greater environmental impact and, consequently, tied to global warming discussions. European nations have been among those



Coal was the nation's fourth-ranked export by tonnage in the month of October, trailing three other energy sources: oil, refined petroleum and natural gas



Worldwide industry leaders in the design and manufacture of electrical cable couplers

Cory Hayes

E: cory.hayes@konnx.net | w: konnx.net

P: 720-297-6900

861 E 73rd Ave, Denver, CO 80229



turning against coal in recent years, which served to increase its dependency on Russian natural gas.

Consequently, Europe is now scrambling to build facilities to convert this LNG back into natural gas, which its nations can more readily accommodate.

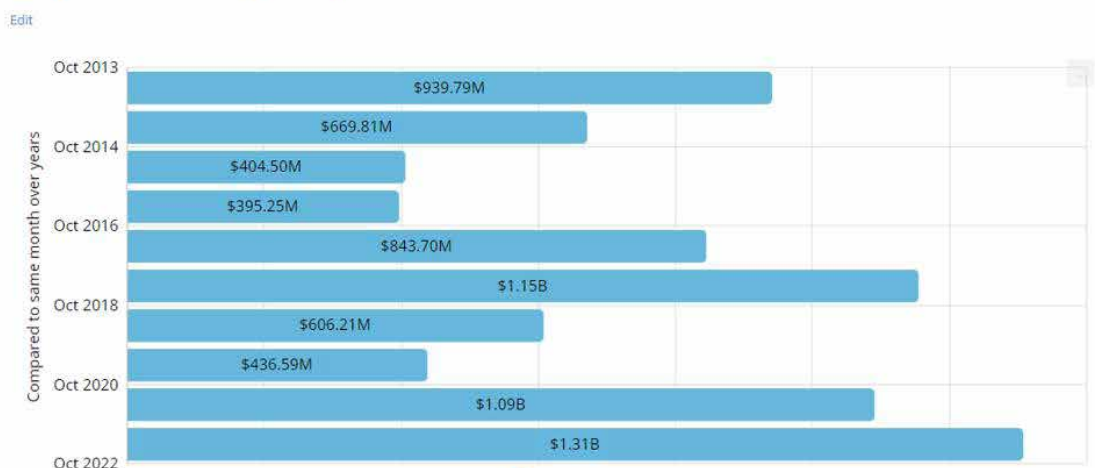
And, now, it means buying more coal.

From 2007 to 2015, Europe had purchased more than half of all U.S. coal exports, by value. By 2021, that had plummeted to 30.39%. Through October of this year, relying on the most current

data, those exports to Europe have surged to 43.47%.

Despite the increase in U.S. coal exports to Europe, overall exports to the world are up less than 1% by weight, according to the latest Census Bureau data, which is through October. That because U.S. exports to Asia, the second-largest market by continent, are down 23.66% by volume (though still up 49.40% by value).

Exports: Coal, briquettes



Coal exports have surged by value, if not by tonnage. The chart compares the value of U.S. coal exports for the month of October for the last 10 years



Huntington, WV
Phone: (304) 736-8333

Beckley, WV
Phone: (304) 250-0000

Morganfield, KY
Phone: (270) 389-3430

Parkersburg, WV
Phone: (304) 464-4400

Norton, VA
Phone: (276) 679-1224

PIPE

- CARBON STEEL
- STAINLESS STEEL
- HDPE
- PVC/CPVC
- AQUAMINE
- ALUMINUM
- CORRUGATED METAL & PLASTIC
- TEFLON LINED PIPE
- SPECIALTY ALLOYS

VALVES

- GATE, GLOBE, CHECK
- BALL VALVES
- BUTTERFLY
- KNIFE GATE
- PLUG
- SEVERE SERVICE VALVES

FITTINGS

- MALLEABLE IRON
- CAST AND FORGED CARBON & STAINLESS
- NIPPLES
- WELD FITTINGS & FLANGES
- VICTAULIC GROOVED PRODUCTS

FABRICATION SHOP

- CUTTING & GROOVING SERVICES UP TO 24"
- THREADING CAPABILITIES OF TO 6"
- 10,000 Sq/FT HDPE FEBRICATION SHOP
- CUSTOM HDPE FEBRICATION UP TO 24" AND SPOOLS UP TO 36"
- HDPE SPECIALIST WILL COME TO YOUR JOBSITE & MEASURE & PROVIDE FULL CAD DRAWINGS
- 2-36" HDPE FUSION MACHINES AVAILABLE TO RENT



(800) 334-5226
www.jabosupply.com

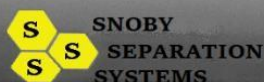
POTENTIAL RAIL STRIKE JEOPARDIZES NATION'S AND ALLIES' ENERGY SECURITY AND SUPPLY CHAINS

WASHINGTON, D.C. – Rich Nolan, President and CEO of the National Mining Association (NMA), issued the following statement on the potential for a rail service strike and its impact on U.S. mining and the supply chains supported by the industry. "A rail strike must be avoided, and we strongly encourage Congress and the Biden administration to take action to facilitate resolution. A rail strike could create a debilitating logistics chokepoint for the movement of energy and materials resources essential to our grid reliability and energy affordability, as well as our manufacturing sector and the energy security of our allies in Europe. The U.S. mining industry is the largest user of the nation's rail networks by volume. Mined metals, materials and energy account for nearly

50 percent of the tonnage moved by rail and nearly 70 percent of U.S. coal production is moved by rail totaling more than 9,000 carloads per day, equivalent to a 100-mile-long train. U.S. Railroads moved 3.3 million carloads of coal in 2021. Ongoing service issues continue to jeopardize coal deliveries, hampering utility efforts to build up coal stockpiles for the winter and ensure the fuel security tens-of-millions of Americans count on. The North American Electric Reliability Corporation has warned of unprecedented threats to the reliability of the nation's power supply this winter. A rail strike would threaten to push an alarming situation over the edge. The nation needs reliable and efficient rail service and it's imperative Congress and the Biden administration act to ensure a strike doesn't jeopardize it."

855-766-9233

855 (SNOW BEE)



**WORLD LEADER IN JIGS TO
REMOVE LIGHT WEIGHTS
FROM SAND & GRAVEL**

Snoby Separation Systems LLC

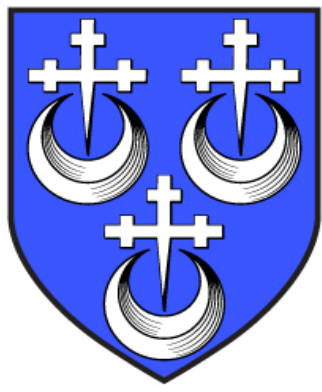
SNOBYLLC.com

INFO@SNOBYLLC.COM

**WORLD LEADER IN
BUCKET WHEELS &
DRAG SCRAPERS**

STICHWEH LLC

MORE SAND.MORE GRAVEL.MORE SUCESS



Cathcart

Rail

**CERTIFIED FULL SERVICE FACILITIES | TANK CAR CLEANING/LINING/COATING
MOBILE REPAIRS | RAILCAR STORAGE | LOADING/UNLOADING | PLANT SWITCHING**



AAR M-1003 CERTIFIED LOCATIONS

- ♦ SHELburn , IN
- ♦ EARL PARK, IN
- ♦ BUCYRUS, OH
- ♦ ALLIANCE, NE
- ♦ GRAND ISLAND, NE
- ♦ HASTINGS, NE

AAR M-1002 CERTIFIED LOCATIONS

- ♦ LYNCHBURG, VA
- ♦ KINGSPORT , TN
- ♦ HINTON, WV
- ♦ ELK MILLS, MD
- ♦ AMARILLO, TX



KEVIN KOEPKE

VP of Sales

Cathcart Rail

kevin.koepke@cathcart-rail.com

402.705.0549

www.tcraillholdings.com

WORLD COAL CELEBRATES CEO RECOGNITION AS GLOBAL INSPIRATIONAL WOMAN IN MINING

World Coal Association (WCA) Chairman, July Ndlovu, today congratulated WCA CEO Michelle Manook for being recognised as one of the world's 100 Global Inspirational Women in Mining (WIM100).

Ms. Manook, CEO of the WCA for 3.5 years, was acknowledged for her courage in leading the global coal alliance through one of coal's most vexatious but transformative periods. Said Mr. Ndlovu: "Despite coal's public vilification, including attempts to cancel coal entirely, Michelle has been stoic, pragmatic and unflappable in having the difficult conversations that no-one wanted to have about coal's role in the energy transition, energy security and development. She has compelled us as a coal value chain to continue to focus on modernisation and transformation through technology. "Significantly, global energy events have now confirmed that there is an ongoing role for coal, validating the work Ms. Manook has been leading. "She continues to conscript a new wave of coal leaders who are not climate denialists

yet understand the critical importance of achieving the UN Sustainable Development Goals, so that neither development nor decarbonisation is compromised." Ms. Manook says she is honoured to be recognised as a recipient by the WIM alumni.

"Taking this role was a difficult decision but one which I believed in, given the impact coal has on billions of people. Coal's existential crisis has provided the coal chain the opportunity to re-evaluate its collaboration and future contribution to our global community.

"I believe we have started to challenge perceptions about coal which are hard to ignore given the reality we are confronted with. I also believe we have challenged our industry to look beyond a future, which will be based on innovation, transformation, and responsible coal stewardship;

with a new group of coal leaders emerging to take this forward."

Women in Mining Managing Director UK, Dr Stacy Hope, said:

"Congratulations to Michelle for her recognition as a WIM100! The WIM100 is a celebration of the inspirational contributions women make to mining so that it is a safer, more sustainable and stronger industry for all.

"Michelle has been recognised for leading the World Coal Association and communicating the essential role coal plays in economic and social progress for billions of people. Since becoming CEO, she has sought to disrupt the conversation about coal and help coal industry participants understand the need to work together in reaching the development and decarbonisation goals of the global community."



CONGRATULATIONS

MICHELLE MANOOK

WORLD'S 100 GLOBAL INSPIRATIONAL WOMEN IN MINING





Vibrating Screen Specialists

Since 1961



Reverse Incline Screen



Horizontal Vibratory Centrifuge

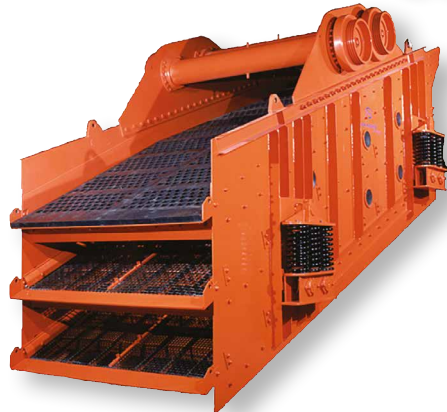


Rotary Breaker



Horizontal Screen

Overhead Drive Incline Screen



A global Leader in Coal, Aggregate, & Mineral Processing

Since its founding, Elgin Separation Solutions has established industry leadership by providing:

- **Design Flexibility** for the most rugged vibrating screens at a competitive price.
- **Dependable Sizing**, wet or dry applications.
- **Efficient Screening** of metallic/nonmetallic minerals, aggregate, sand, gravel, crushed stone, coal and recycling materials.
- **Wide Selection of Quality Repair Parts**
- **24/7 Emergency Service**
- **Application Assistance**

Elgin Offers a Full Line of Vibrating Screens

- ✓ **Incline, Multi-Slope, Horizontal and Fine Dewatering Screens**
- ✓ **Available in Single, Double, Triple or Multi-Slope Decks**
- ✓ **Available in sizes ranging from 3' to 14' W & 6' to 28' L**



Elgin Separation Solutions

1176 Shelter Road • Princeton, WV 24740

Phone: (304) 431-4100 • Fax: (304) 325-2348

Email: mining.info@elginps.com

www.elginseparation.com

Treasurer Moore Highly Deserving of National Recognition for Defending Consumers, Businesses Against ESG Initiatives



Charleston, W.Va. – West Virginia Treasurer Riley Moore received the Consumers' Research "Consumers' Champion Award" recently for his efforts to defend West Virginia residents and businesses from harm being imposed through the Environmental, Social and Governance (ESG) movement. Chris Hamilton, President of the West Virginia Coal Association and Immediate Past Chairman of the West Virginias Business & Industry Council, said, "Treasurer Moore deserves the highest praise for his efforts to push back against discriminatory ESG policies and for sparking a national movement to do the same." "Treasurer Moore was quick to recognize the difficulties ESG policies were having on West Virginia's foundational industries, energy workers, and their families, and was even quicker

to forge ahead with a sensible program to remedy discriminatory practices against West Virginia companies." The award was presented by Consumers' Research, an independent educational 501(c)(3) nonprofit organization devoted to increasing the knowledge and understanding of issues, policies, products, and services of concern to consumers and to promote the freedom to act on that knowledge and understanding. The award was presented during the State Financial Officers Foundation 2022 Fall National Meeting in Washington, D.C. In making the award, Will Hild, Executive Director of Consumers' Research, stated, "I am thrilled to give the Consumers' Champion Award to Treasurer Moore. Because of his leadership, West Virginians are protected from financial institutions looking to put politics ahead of their

duties." Upon receiving the award, Treasurer Moore graciously remarked, "I am honored to receive this prestigious award from Will Hild and Consumers' Research, who have done tremendous work in raising awareness of the dangers of these radical ESG policies." "Since taking office, I have made it my mission to fight back against the globalist woke elites who are using ESG policies to try to force their extreme agenda on our economy and way of life. These policies are hurting the West Virginia economy and go against the values of our people." Hamilton noted that energy industry groups like the West Virginia Coal Association, as well as business groups like the West Virginia Business & Industry Council, have significant concerns over unchecked ESG policies.

Below the deck...we're a cut above.

- Truck systems
- Side frames
- Bolsters
- Constant contact side bearings
- Couplers
- Draft sills
- Coil springs
- Center plates
- Draft gears
- Bearing adapters
- Cushioning units
 - End-of-car
 - Center-of-car


- Wheels, curved-plate, heat-treated

- Roller bearings



Amsted Rail

200 W. Monroe Street • Chicago, IL 60606 • (312) 853-5680 • amstedrail.com

A close-up, diagonal view of the American flag, showing the blue field with white stars and the red and white stripes. The flag is draped over a dark, textured surface.

PLEASE STAY TUNED FOR OUR BRAVE COAL MINERS WHO LOST THEIR LIVES IN THE INDUSTRY IN 2022

**SPECIAL THANKS TO
OUR CURRENT
SPONSORS**

Amsted Rail[®]

TERRASOURCE[®]
GLOBAL

ASGCO[®]

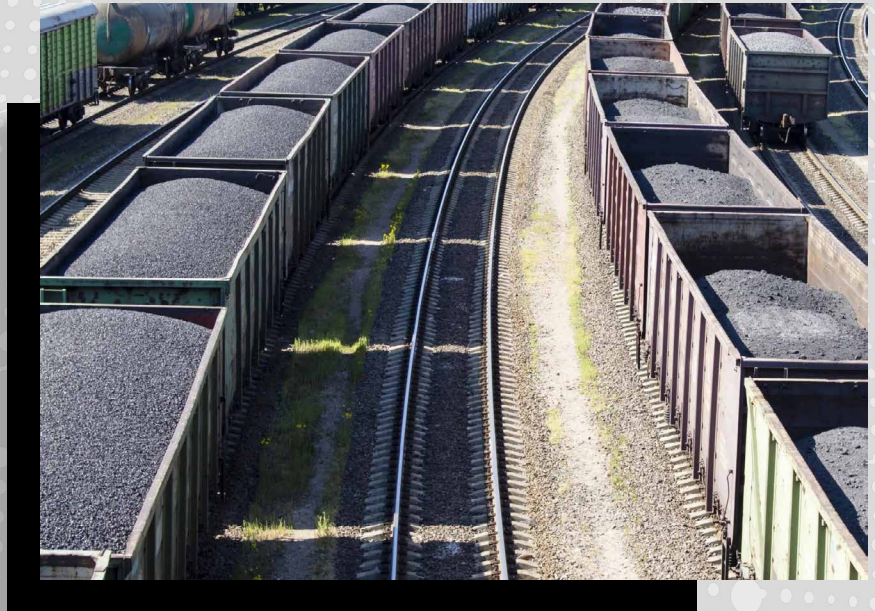
A stylized logo consisting of a black 'K' shape with a yellow arrow pointing to the left, integrated into the vertical stroke of the 'K'.**KENNAMETAL**

Please contact maria@martonickpublications.com for the opportunity to sponsor the memorial section



WORLD NEWS

AFTER 8 YEARS, PAKUR MINE SENDS COAL TO PUNJAB



Dumka: After nearly eight years of being grounded due to various legal hurdles, transportation of coal from Pachuara central coal mine at Amrapara in Pakur district resumed with coal rakes being dispatched to Punjab.

The development assumes significance for the Punjab government, which is facing tough challenges in meeting the coal requirements to feed three power plants run by the Punjab State Power Corporation Limited. It was re-allotted the Pachuara central coal block in 2015 by the Union government.

A team of the PSPCL led by chief engineer J S Bhatiya was camping in Pakur for the last one week to supervise the resumption work.

Coal mining works and supply has been outsourced to another private agency Dilip Buildcon. "Efforts were on to resume exploration works at Pachuara central coal block soon after the legal deadlock was resolved following a Supreme Court order



in September last year," Bhatiya told reporters during the flag-off ceremony of the coal rake train along with the officials and employees of railway and Dilip Buildcon Limited (DBL). Punjab

chief minister Bhagwant Mann is expected to personally present in Ropar on December 15 to receive the rakes, said sources. "Nearly eight million tonne of coal will be supplied from Pachuara central coal block to Punjab annually," Rakesh Singh of the DBL said. "Residents living around the mining area are also very happy about the resumption of activities at the Pachuara central coal block as it will revive their livelihood opportunities too," said D K Jha of DBL.

WORLD NEWS



NOVA SCOTIA RENEWS APPROVAL FOR DONKIN MINE



Morien Resources Corp. announced that the Nova Scotia Department of Environment and Climate Change has approved a request from Kameron Collieries ULC, owner and operator of the Donkin mine, to renew its industrial approval for the mine. The seven-year approval took effect on December 5, 2022, and expires on December 31, 2029.

The Donkin mine is an underground mining operation that produces cross-over coal, one that can be used for steelmaking or power generation. It has a probable mineable reserve of 58 million metric tons (mt). The reserve estimate is based on an indicated resource of 174 million mt. The mine has access to port facilities nearby.

Morien owns a gross production royalty for the mine of 2% on the revenue from the first 500,000 mt of coal sales per calendar quarter, net of certain coal handling and transportation costs, and 4% on the revenue from any coal sales from quarterly tonnage above 500,000 mt, net of certain coal handling and transportation costs.



Making Too Many Calls?

Freight Car Parts...

Locomotive Parts...

AEI Equipment...

 **Comet**

One call does it all! 800-878-9440

COLD, DARK AND EXPENSIVE

By: Conor Bernstein

Surging energy prices are colliding with renewed grid reliability concerns this winter. The rising price of electricity and the surging price of natural gas is putting new wind in the sails of energy-driven inflation that reached 8.2% in September.

According to the Bureau of Labor Statistics' Consumer Price Index, the cost of electricity is up 15.5%, the largest 12-month increase in 40 years, and the cost of natural gas is up a staggering 33.1%. Natural gas prices are spilling over into nearly every dimension of the economy, with the cost of electricity high on the list.

This surge in natural gas prices — with the Henry Hub benchmark hitting a 14-year high in August — appears here to stay and we're only beginning to understand what it will mean for the competitiveness of the U.S. economy and consumers' wallets.

Amid a global energy crisis, the U.S. is now the world's largest LNG exporter, meaning the domestic gas market is now influenced by prices and buyers in energy-hungry Europe and Asia, a novel dynamic since the emergence of shale gas production a decade ago and the rapid development of exporting capacity that followed.

Crossing Fingers and Hoping

Poor planning and irresponsible policy have erased critically important fuel diversity in New England. While the loss of coal capacity has taken a toll on fuel diversity, fuel security and affordability across much of the country, the situation in New England is particularly dire. The U.S. Energy Information Administration recently reported that prices at major power trading hubs across the country will be about 20%-60% higher on average this winter with the highest wholesale electricity prices likely to be New England.

Two decades ago, coal and oil generation accounted for roughly 35% of the region's power supply and often far more during periods of peak demand during cold snaps. Natural gas, on the other hand, provided just 13% of power supply. Today, coal and oil generation are gone while gas now meets 53% of power demand. Promised renewable power additions have not materialized, often blocked by NIMBYISM that has taken down offshore wind projects, transmission lines needed to carry hydro power into the region and even a number of proposed natural gas pipelines that would have added much-needed slack to the Northeast's constrained gas-delivery system.

With fewer and fewer options, the region's grid operator, ISO New England, is running out of cards to play to ensure homes stay warm and the lights stay on when demand surges.

At a recent Federal Energy Regulatory Commission conference on New England's fuel security challenges, commissioner James Danly said, "we're going into this winter basically crossing our fingers and hoping."

Each new reliability crisis — whether in California, Texas, Europe or now New England — is an opportunity to learn, to recognize missteps and avoid the same mistakes. But despite the ever-mounting warnings and examples of the danger of mismanaging the energy transition, a course correction hasn't materialized.

There's an underlying story

that's driving these crises despite regional and market differences. The nation's dispatchable fuel diversity is being dismantled while the proposed replacements aren't materializing at the nearly the speed and scale required or with the same reliability attributes grid operators must have. Crossing fingers and hoping the power stays on during the coldest days of winter while the bill doubles is hardly the energy future Americans want or deserve.



Conor Bernstein is a spokesperson for the National Mining Association, the industry's trade group based in Washington, D.C.

COAL STORAGE



(Lake Charles, Louisiana)

Building silos, conveyors, and controls for handling coal is an area of expertise for Borton.



(Converse County, Wyoming)



(Louden, Tennessee)

Borton can help the customer design, plan, and build their coal storage facility. Our experienced engineers can assist with the crucial designing stage. Our experience allows us to utilize the latest technological advancements.

Renovation of existing facilities can improve efficiency and meet the customer's ever-changing requirements.

Whether the customer's project includes loading out by train, truck, or ship, Borton will incorporate the latest technology in automation, scales, and conveying.



Borton, L.C. • 200 E. First St. • Hutchinson, KS 67501 • Voice (620) 669-8211 • Fax (620) 662-3225 • borton@borton.biz



FlyAshDirect



*The NEXT GENERATION.....
.....in FLY ASH BENEFECIATION*

CARBON BLOCKER™

- ✓ **PROVEN** and **PATENTED** Technology approved for use by many **State DOT** agencies
- ✓ **EXTENSIVE** field experience since 2005
- ✓ **HIGHLY EFFECTIVE** on **POWDERED ACTIVATED CARBON**
- ✓ Minimal **CAPITAL** costs and no plant interruption

*Contact FlyAshDirect's **Concrete Research Laboratory** to schedule a **FREE** comprehensive analysis of your ash. The proof is in the results.*



FlyAshDirect
866-871-9733
www.flyashdirect.com

In partnership with:
 **BASF**
The Chemical Company

Current National Coal Transportation Association Members

A. Stucki Company
 Ameren Energy Services
 American Electric Power
 Amsted Rail
 Arch Resources, Inc.
 Arizona Electric Power
 Coop. Inc.
 Associated Electric
 Coop., Inc.
 Associated Terminals
 AVENTICS Corporation
 (Emerson)
 Basin Electric Power
 Cooperative
 Blackhawk Mining
 Cal Portland Cement
 Cathcart Rail, LLC
 CEI
 Cleco Corporation
 Colorado Springs Utili-
 ties
 Consumers Energy Com-
 pany
 Cooper Consolidated
 CPS Energy
 Crown Products
 David J. Joseph Compa-
 ny
 Detroit Edison
 Duke Energy
 Eco Material Technolo-
 gies
 Entergy Services, Inc.
 Excel Rail Management,
 LLC
 Fras-Le North America
 FreightCar America
 GATX Rail
 Grand River Dam Au-
 thority
 Hall St. Coal Terminal
 High Country Railcar
 HUM Industrial Technol-
 ogy

Intermountain Power
 Service Corp.
 Kiewit Mining Group, Inc.
 L.E. Peabody & Associ-
 ates, Inc.
 Levin Richmond Termi-
 nal
 Lexair, Inc.
 LG&E and KU Energy
 Lower Colorado River
 Authority
 Luminant Energy
 McCloskey
 McConway & Torley, LLC
 Mid-American Energy
 Company
 Midland Railway Supply
 Miner Enterprises Inc.
 Minnesota Power
 MinTech Enterprises, LLC
 Muscatine Power &
 Water
 Navajo Transitional Ener-
 gy Company
 Nebraska Public Power
 District
 New York Air Brake
 Oglethorpe Power Corp.
 Oklahoma Gas & Electric
 Co.
 Omaha Public Power
 District
 Peabody Energy
 Platte River Power Au-
 thority
 Progress Rail Services,
 Inc.
 Railroad Financial Cor-
 poration
 Ramaco Coal
 RAS Data Services
 Salt River Materials
 Group

Salt River Project
 Sandy Creek Energy
 Station
 Santee Cooper Power
 Slover & Loftus, LLP
 SMBC Rail Services, LLC
 Southern Company
 Services
 Strato, Inc.
 Tennessee Valley Au-
 thority
 Timken Company
 Transportation Services
 Inc.
 Transportation and Lo-
 gistics Advisors, LLC
 TrinityRail
 Tri-State Generation and
 Transmission Associa-
 tion
 TUCO/NexGen Services
 WEC Energy Group
 Wabtec Corporation
 Waste Connections
 WEC Energy Group
 Wells Fargo Rail
 Western Farmers Electric
 Coop.
 Western Fuels Associa-
 tion, Inc.
 Xcel Energy
 Xcoal Energy & Resourc-
 es

Current American Coal Council Members

Coal Suppliers:

Alliance Coal, LLC

Tim Whelan, SVP Sales & Marketing
Robert Sachse, Executive Vice President

Alpha Coal Sales Co., LLC

Bill Davison, President and Manager

Arch Coal Sales Company, Inc.

Mark Canon, Vice President Int'l
Thermal Mktg. Steve Watson,
Director-Trading & Origination

Blackhawk Mining, LLC

Bob Bennett, EVP & Chief
Commercial Officer, Mitch Potter,
Chairman & CEO Chris Moravec,
President

Central Coal Company

Clark Wisman, Sales

Cloud Peak Energy

Tom Nelson, Vice President Sales &
Marketing

CONSOL Energy Inc.

James McCaffrey, Chief Commercial
Officer

Converse and Company, Inc.

Justin Converse, Chairman/CEO Lee
Mason, President

Glencore Ltd.

John McConaghy, Coal Executive
Jason Gold, Coal Executive

Global Coal Sales Group, LLC

Donald Drabant, President
Steve Read, EVP Sales

Hallador Energy Company

Larry Martin, Chief Financial Officer
Elliott Batson, VP Business
Development & CCO

Integrity Coal Sales, Inc.

Gregg Licata, President
Kevin McEvoy, General Manager

JRL Coal

Tim Lusby, CEO, Director
Cecil Lewis, Director of Sales &
Marketing

Jesse Creek Mining, LLC

Scott Spears, Chief Executive Officer

Kiewit Mining Group Inc.

Mike Nimmo, President
John Faulconer, Marketing Manager

Lighthouse Resources Inc.

Everett King, President & CEO
Tay Tonozi, COO-LHR Coal

Marsh Fork Development Company

John Wellford III, President

Murray Energy Corporation

Robert E. Murray, Chairman,
President and Chief Executive Officer
B.J. Cornelius, President Sales

NexGen Coal Services, Ltd.

Charles S. McNeil, CEO
Mark Adkins, Vice President

Pickands Mather Coal Company

Scott Brown, President
Jack Grinwis, Managing Partner

Paringa Resources Limited

Hartshorne Mining Group Adam
Anderson, Senior Vice President
Marketing/Sales

Peabody

Michael Siebers, SVP Sales &
Marketing, Alice Tharenos, VP
Commercial Strategies

Ramaco Coal, LLC

Randall Atkins, Chairman & Chief
Executive

River Trading Company, LTD

Edward Hatfield, President
John Grantham, Vice President

Robindale Energy Services, Inc.

Scott Kroh, CEO
Mike Meehan, Vice President
Fletcher Dennis, General Manager
of Coal Supply

Rosebud Mining

Cliff Forrest, President
Jim Barker, Executive Vice President
Matt Mazefsky, General Counsel

Usibelli Coal Mine, Inc.

Loralie Simon, VP External Affairs
Lisa Herbert, Vice President-Public
Relations. Robert Brown, VP
Business Development

Westmoreland Coal Company Scott

Sturm, VP Sales & Marketing Paul
Fritzler, Sales Director

White Stallion Energy, LLC

Steve Hicks, Managing Director of
Sales

XCoal Energy & Resources

Ernie L. Thrasher, President

Coal Consumers:

AEP Generation Resources

Jim Henry, Vice President
Kimberly Chilcote, Fuel Buyer Staff

Alliant Energy

Jim Dalton, Manager, Fuel Supply
and Transportation

Ameren Missouri

Trevor Pettus, Manager, Trading
Energy Marketing & Trading
Jeff Jones, Sr. Manager, Energy &
Fuels Trading

Consumers Energy

Angie Rissman, Coal Procurement
Manager Brian Gallaway, Executive
Director Fossil Fuel Supply

Dominion Energy

Ben Baughan, Senior Market
Originator

DTE Energy – DTE Electric Company

Christy Wicke, Exec Dir. Generation
Optimization and Corporate Fuel
Supply. David Hicks, DirectorCorporate
Fuel Supply

Duke Energy

Brett Phipps, Managing Director -
Fuel Procurement

Entergy

Jesse Richardson, General Manager

FirstEnergy

David Frederick, Director, Fuel
Procurement
Shaun Grayson, Staff Fuels Specialist

Great River Energy

Charlie Bullinger, Senior Principal
Engineer

KCP&L and Westar Energy

Dan Hartzell, Fuels Analyst, Senior

LGE-KU Services Co.

Caryl Pfeiffer, Director Corporate
Fuels & By- Products
Delbert Billiter, Manager Fuels Risk

Lafarge Holcim US Inc.

Christian Dueweke, Regional Energy
Manager- Fuels

Jim Gilbert, Commodity Mgr - Solid
Fuels & Raw Materials

Lakeland Electric

Ken Riddle, Supervisor of Chemical
Processes. Tory Bombard, Fuels
Manager

Luminant

Randall Talley, Director Fuel &
Emissions Trading. Lee Adams,
Manager Coal Trading

MidAmerican Energy Company

Peggi Allenback, Director,
Market Operations, Trading,
and Transaction Origination.
Dave Halligan, Coal Portfolio &
Transportation
Manager

NRG Energy, Inc.

Ginny Farrow, Portfolio DirectorCoal
and Oil

Nebraska Public Power District

Gary Stuchal, Director of Fuels

Newmont Nevada Energy Investment

LLC

John Seeliger, Regional Energy
Manager

Northern Indiana Public Service

Current American Coal Council Members

Company

John Wagner, Manager - Fuel Supply

Omaha Public Power District

Ernie Parra, Fuels Supply Manager

Platte River Power Authority

Heather Banks, Fuels and Water Manager

PowerSouth Energy Cooperative

Ron Graham, Vice President, Power Supply

Salt River Project

Bobby Olsen, Director, Supply

Trading & Fuels

Bill Marozzi, Lead Fuel Supply Analyst

Sandy Creek Services, LLC

Byron Kohls, Project Director

Seminole Electric Cooperative, Inc.

Jason Peters, Portfolio Director

Southern Company

Brian Fuller, Director Coal Services

John Ohlson, Manager, Coal and Transportation Procurement

Talen Energy Marketing, L.L.C.

Nate Collamer, Managing Director PJM

Tampa Electric Company

Martin Duff, Fuels Strategist

Tennessee Valley Authority

Greg Nunley, Director Coal Services, Coal and Gas Services

Tri-State Generation and

Transmission Association, Inc.

Mike Sorensen, Senior Manager, Fuel & Water Resources. Drew Kramer, Senior External Affairs Advisor

WEC Energy Group

Doug Wetjen, Director, Solid Fuel and

Renewable Resources

Xcel Energy

H. Craig Romer, Director Fuel Supply Operations. James Witt, Principal Fuel Portfolio Coordinator

Energy Traders:

Alliance Metals

Larry Gitman, President

Bunge

Raphael Pierce, Energy Products Director

Corsa Coal Corp.

Matt Schicke, Chief Commercial Officer

JERA Trading North America, LLC

Chris Savage, Head of US Coal

Transportation Companies:

AEP / Cook Coal Terminal

Kim Queen

Michael Kovach, Plant Manager

American Steamship Company

David Foster, President

Associated Terminals LLC

Terry May, Senior Vice President

BNSF Railway

Jennifer Sackson, Assistant Vice President, Coal Sales and Marketing

Canal Barge Company, Inc.

Larry Barbish, VP - Dry Cargo

Herb Shubert, Dry Cargo Sales & Logistics

CN Railway

Todd Nuelle, Dir. Sales & Mktg US

Coal, Bulk. James Gunther, Account Manager US Coal

Cooper Consolidated, LLC

Scott Becnel, Director Energy Sales

& Business Development

Eric Hansen - Vice President

Crounse Corporation

Justin Dickens, Manager-Risk

Administration Robert L. Englert, Jr., Senior Vice President - Operations

CSX Transportation

Shon Yates, Vice President - Coal

East Side River Transportation, Inc.

Jim McEvilly, President

Genesee & Wyoming

Michael Miller, President, North America

Ingram Barge Company

Joe Johnson, AVP Coal

Interlake Steamship Company

Brendan O'Connor, Vice President - Marketing and Marine Traffic

Kirby Ocean Transport Company

John Hallmark, President, Osprey Line

Bill Withers, SVP Sales

Norfolk Southern Corporation

Rob Zehringer, GVP - Coal Marketing

Paducah & Louisville Railway

Thomas Garrett, President

Kevin McEwan, Vice President

Marketing Chris Reck, AVP, Sales & Industrial Development

Savage Services

Terrence Savage, SVP & Industry

Unit Leader. Rob Davidson, VP

Business Development

SCH Services, LLC

Bill Rager, Chief Operating Officer

Gary Quinn, Vice President Utility

Services

T. Parker Host, Inc.

David Host, Executive Director

David Host Jr., Executive Vice

President

Union Pacific Railroad Company

Linda Brandl, Vice President and

General Manager Energy

Jackie White, Assistant Vice

President

United Bulk Terminals USA, Inc.

Philipp Kroepels, General Manager

Westshore Terminals

Glenn Dudar, Vice President &

General Manager

Coal Support Services

Analytical & Environmental

Services:

Buchanan Ingersoll & Rooney

Matthew Burger, Chair, Energy Section

Golder Associates Inc.

Alana Arcand, National Mining Sector

Coordinator. Jerry Gauntt,

Associate, Business Development

Leader - Mining North America

Hanson Aggregates

Mike Greenawalt, Account

Representative

Craig Morgan, Vice President/

General Manager

Natural Resource Partners LP

Greg Wooten, Vice President

& Chief Engineer. Vera Gartin,

Administrative Assistant

Sampling Associates International

Paul Reagan, President

SGS Minerals Services

Buddy Hancock, Director, Eastern

Operations US Minerals

Marc Rademacher, Regional

Manager, Energy West

Suez Water Technologies &

Solutions

Scott Smith, CoalPlus Commercial

leader-NAM Jeff Peters, Power

Industry Leader

Tinum Group, LLC

Ron Eller, President & CEO

Young Century Micro Tech Inc.

Matt Lerschen, Associate Director

Jong Yoon, President

Current American Coal Council Members

SUPPLIERS:

Charah Solutions, Inc.

Danny Gray, Executive Vice President for Governmental/ Environmental Affairs. Nathan Boone, SVP - Business Development

Crown Products & Services, Inc.

Doug Simmons, President

FreightCar America

Ted Baun, Chief Commercial Officer
Mike MacMahon, Vice President, Marketing & Sales Administration

JENNMAR

Tony Calandra, Executive Vice President of International Sales
C. Ray Wilson, Technical Sales Manager, Midwest

Komatsu Equipment

John Pfisterer, President
Joel Cook, Executive Vice President Sales

Martin Engineering

Chelsea Blake, Marketing Specialist
Timothy O'Harran, National Sales Manager, Conveyor Products

MinTech Enterprises LLC

Harry Heydorn, General Manager
Su Schwenck, VP, Managing Director

Nalco Water

Jack Cranfill Director of Corporate Accounts. Lynn Martin, Account Coordination Manager

Progress Rail Services

Dwight Porter, PRB/Nat'l Sales Manager

Richwood

Judd Roseberry, Chief Executive Officer. Kevin Maloy, Chief Operating Officer

TrinityRail

Gayle TenBrink, Vice President Sales

FINANCIAL, CAPITAL & MARKET-ING

ASSOCIATES:

Boral Material Technologies LLC

Craig Plunk VP Utility Relations
Steve Benza, Vice President Business Development. Mitchell Smith, Director - Supply Sourcing. Rafic Minkara, VP, Technology

Wells Fargo Rail Corporation

Carrie Stead, Senior Risk Officer

TECHNICAL & ECONOMIC CONSULTANTS:

Argus Media, Inc.

Michael Easterbrook, VP Business Development

Doyle Trading Consultants

Hans Daniels, CEO

Vicky Bray, Director of Client Services

Energy Ventures Analysis, Inc.

Seth Schwartz, President

Genscape

Chris Seiple, Managing Director

Hellerworx, Inc.

Jamie Heller, President

IHS Markit

Jim Thompson, Executive Director, US Coal. James Stevenson, Director Americas Coal

John T. Boyd Company

John Boyd II, President & CEO
William P. Wolf, Vice President – Business and Market Analysis

McGuireWoods LLP

Leonard Marsico, Partner & Coal Team Leader

Marshall Miller & Associates

Scott Keim, President

S&P Global Platts

Jeremy Mathis, Field Marketing Manager. Steve Piper, Associate Director, Energy Product Management

Slover & Loftus LLP Daniel Jaffe,
Partner Frank Pergolizzi, Partner

CONTRIBUTING SUPPORTERS:

American Coal Ash Association

Thomas Adams, Executive Director

American Coal Foundation

Alma Paty, Executive Director

American Coalition for Clean Coal

Electricity (ACCCE)

Michelle Bloodworth, President & CEO

Carbon Utilization Research Council

Shannon Angielski, Executive Director

Department of Entomology,

Faculty of Agriculture, Annamalai University

Dr. P. Narayanasamy, Professor & Head, Dept. of Entomology

Energy & Mineral Law Society

Tracy Justin Dempsey, President

Energy Policy Network

Randy Eminger, Executive Director

Global Commerce Forum

Dr. Luka Powanga, Executive Director

Illinois Coal Association

Phil Gonet, President

Lignite Energy Council

Steve Van Dyke, Vice President, Communications

National Tribal Energy Association

CJ Stewart, Board Director

Rocky Mountain Electrical League

Rick Putnicki, Executive Director
Kathryn Hail, Manager, Marketing & Communications

Texas Mining and Reclamation Association

Ches Blevins, Executive Director and General Counsel

The Coal Association of Canada

Robin Campbell, President

UNC Charlotte

John Daniels, Professor and Chair, Department of Civil and Environmental Engineering

University of Kentucky - Center for Applied Energy Res.

James C. Hower, Senior Scientist
University of North Dakota, Energy & Environmental Research Center
Loreal Heebink, Senior Project Management Specialist- Energy & Environmental Research Center
Jason Laumb, Senior Research Manager

Virginia Coal & Energy Alliance

Virginia Farmer-Altizer, Executive Director of Education and Outreach

West Virginia University

Nat'l. Research Center for Coal & Energy

Richard A. Bajura, Director, National Research Center for Coal and Energy

Western Research Institute

Dr. Alan Bland, VP Waste & Environmental Mgt.

Wyoming Policy Institute

Janie White, Executive Director

ACC Staff

1101 Pennsylvania Ave., NW, Ste. 300

Washington, DC 20004 (202) 756-4540. FAX: (202) 756-7323 www.americancoalcouncil.org

info@americancoalcouncil.org

americancoalcouncil.org

Chief Executive Officer

Betsy Monseu bmonseu@americancoalcouncil.org

americancoalcouncil.org

Communications Director T.L.

"Terry" Headley theadley@americancoalcouncil.org

americancoalcouncil.org

Education & Marketing Director

Ingrid Shumate Raboteau

ishumate@americancoalcouncil.org

Member Services Coordinator

Michele Rubin mrubin@americancoalcouncil.org

americancoalcouncil.org

Legal Counsel

Cara Lawrence, Tierney Lawrence LLC

Current American Coal Ash Association Members

Utility Members (27):

AES Corporation
Ameren Energy
American Electric Power (AEP)
Aurora Energy, LLC
Colorado Springs Utilities
Colstrip Energy Limited Partnership
Dairyland Power Cooperative
Dominion
DTE Energy
Duke Energy
FirstEnergy Corp.
Great River Energy
Kansas City Board of Public Utilities
Kansas City Power & Light
LG&E and KU Services Company
(formerly E.ON U.S.)
Lower Colorado River Authority
Muscatine Power & Water
Nebraska Public Power District
NRG Energy
Prairie State Generating Company
South Carolina Electric & Gas Company
Southern Company
Southern Illinois Power Cooperative
Talen Energy
Tennessee Valley Authority
Tri-State Transmission & Generation
Association, Inc.
WEC Energies Group

Marketer Members (12):

Boral Resources
Charah, LLC
Kansas City Fly Ash LLC
Lafarge/Holcim
MRT - A CEMEX Company
National Minerals Corporation
Nebraska Ash
Salt River Materials
Separation Technologies LLC
The SEFA Group
Waste Management
ZAG International

Specialty Marketers (6):

Beneficial Reuse Management
Lehigh Cement
SCB International Holdings, LLC
Sphere One, Inc.
U.S. Minerals
USC Technologies

Associate Members (69):

AECOM
Amec Foster Wheeler
Anne Ellis
APTIM
ASH Mineral Solutions
Beneficiate: North America

Bloomsdale Excavating Co, Inc
Brad Cole Construction Co, Inc.
Brook Ridge Consulting, LLC
CALM Initiative
Cementitious Solutions, LLC
CETCO
Chesapeake Containment Systems
Civil & Environmental Consultants, Inc.
DiGioia Gray and Associates, LLC
DustMaster Enviro Systems
EnCAP-IT
Enviro-Sense, LLC
Environmental Resources
Management
Environmental Specialties
International, Inc.
GAI Consultants, Inc.
GEI Consultants, Inc.
Georgia-Pacific Gypsum, LLC
GHD
Global Containment Solutions
Glover Construction Co, Inc.
Golder Associates
Gradient
Griffin Dewatering
Ground/Water Treatment &
Technology
Haley & Aldrich, Inc.
Hallaton Environmental Linings
Hanson Professional Services
HDR
Hilltop Enterprises, Inc.
Hull & Associates, Inc.
Ish Inc
John Ward Inc.
Lhoist North America (formerly
Chemical Lime Company)
Moretrench
MRR Southern
NAES Corporation
National Gypsum Company
Nelson, Mullins, Riley & Scarborough
Nu-Rock Technology Pty. Ltd
Periodic Products, Inc.
Philen Construction
Phillips and Jordan, Inc.
Pincelli & Associates, Inc.
ProAct Services Corporation
Quikrete Companies, LLC
Rich Kinch
R.J. Smith Construction, Inc.
RECON
Republic Services
RPM Solutions
S&ME, Inc
Saiia Construction Company, LLC
SCS Engineers
Sevenson Environmental Services Inc.
Silar Services Incorporated

Son-Haul, Inc.
SonoAsh
Stantec
Tetra Tech
Trans Ash
TRC Environmental Corporation
United States Gypsum Company
University of Kentucky - CAER
Waste Connections, Inc.

Individual Members (16):

Brigitte Brown, University of Wisconsin
- Madison
Bethany Buckland, University of
Missouri at Kansas City
W. Lee Daniels, VA Tech Foundation
Sen Du, Washington State University
Livingstone Dumenu, University of
North Carolina at Charlotte
Jenberu Feyyisa, University of North
Carolina at Charlotte
Sarah Hodges, University of Kentucky
Ryan Holmes, University of Missouri
Kansas City
Shinhyu Kang, Oklahoma State
University
Richard Pepper, UNC Chapel Hill
Siamak Riyazi, University of Missouri at
Kansas City
Christopher Swan, Tufts University
Ross Taggart, Duke University
Trevor Williamson, The University of
Texas at Austin
Gang Xu, Washington State University

Honorary Members (19):

Allen Babcock
Dale Baker
Claude Brown
Jim Burnell
Craig Cain
John H. Faber
Dean Golden
David J. Hassett
Howard Humphrey
Gary Jablonski
Dennis Jones
Oscar Manz
James Merkel
Dr. Tarun Naik
James Plumb
Joseph Pound
Simons Prins
Robert Styron
Jim Weeks

Current RMEL Members

Affiliated Engineers, Inc.
 Alberici Constructors
 Altec Industries, Inc.
 Alumbra LLC
 American Coal Council
 American Fire
 American Public Power Association
 Ampirical
 APTIM
 Arizona Electric Power Cooperative, Inc.
 Arizona Public Service
 Arkansas River Power Authority
 ASEC Inc.
 Asplundh Tree Expert, LLC
 Associated Electric Cooperative, Inc.
 Austin Energy
 Babcock & Wilcox Company
 Babcock Power, Inc.
 Barr Engineering Co.
 Basin Electric Power Cooperative
 Black & Veatch Corp.
 Black Hills Corporation
 Black Hills Electric Cooperative
 Boilermakers Local #101
 Boone Electric Cooperative
 Bountiful City Light & Power
 Brooks Manufacturing Company
 Burns & McDonnell
 Butler Public Power District
 C. M. Lantana Consulting
 Carbon Power & Light, Inc.
 CDG Engineers, Inc.
 Center Electric Light & Power System
 Central Nebraska Public Power and Irrigation District
 ChemTreat
 Chimney Rock Public Power District
 City Light & Power, Inc.
 City of Alliance Electric Department
 City of Aztec Electric Department

City of Farmington
 City of Fountain
 City of Garden City
 City of Gillette
 City of Imperial
 City of Yuma
 Collaborative Learning, Inc./
 Collaboration Unlimited
 Colorado Highlands Wind LLC
 Colorado Rubal Electric Association
 Colorado Springs Utilities
 Colorado State University
 Commonwealth Associates, Inc.
 Copperleaf
 Core Electric Cooperative
 CPS Energy
 D. C. Langley Energy Consulting, LLC
 Delta Montrose Electric Assn.
 Durr Universal, Inc.
 El Paso Electric Company
 Electrical Consultants, Inc.
 ElectroTech, Inc.
 Emerson
 Empire Electric Association, Inc.
 Energy Executive Course University of Idaho
 Energy Providers Coalition for Education (EPCE)
 Engineering, Procurement & Construction, LLC
 ESC engineering An EN Engineering Company
 Estes Park Power & Communications
 Evans, Lipka and Associates, Inc.
 Evapco Dry Cooling, Inc.
 Energy, Inc.
 Exponential Engineering Company
 Forbes Bros Group of Companies
 Fort Collins Utilities
 Fugro
 Gamber-Johnson LLC
 Gannett Fleming Inc.
 Garkane Energy Cooperative

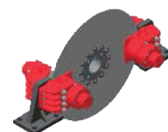
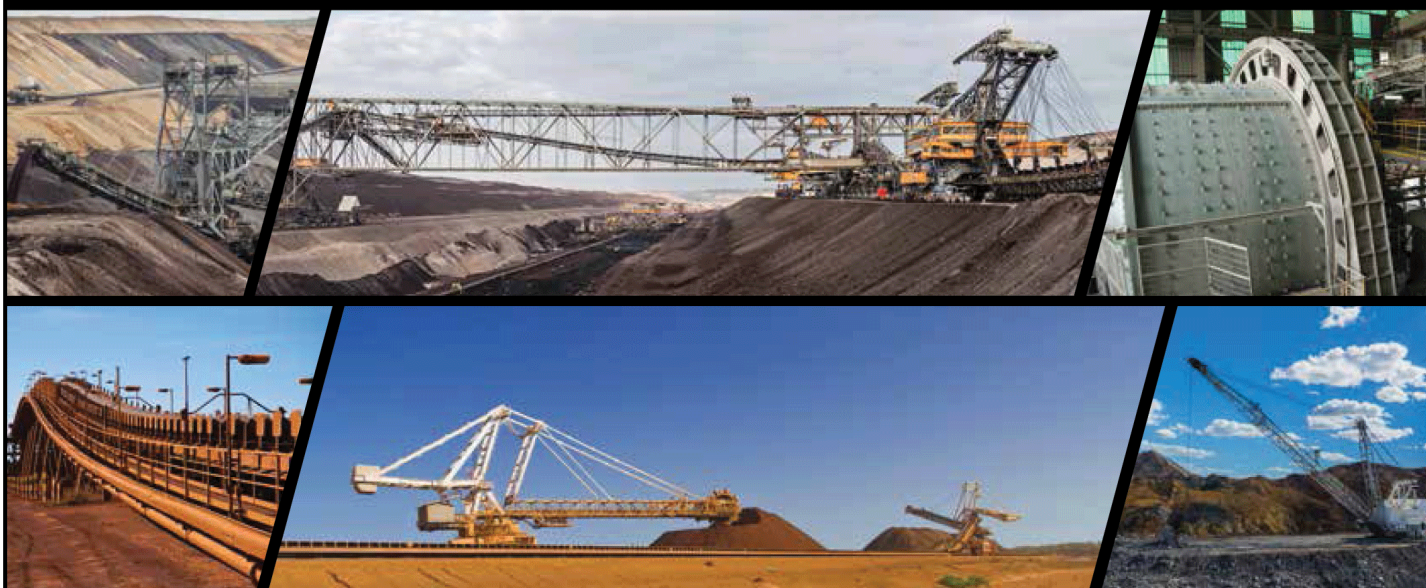
Inc.
 GE Gas Power
 General Grid Services
 Grand Island Utilities
 Great Plains Safety and Health Organization
 Great Southwestern Construction, Inc.
 Hartigan Power Equipment Company
 HDR
 Highline Electric Assn.
 Holy Cross Energy
 Hubbell Power System
 Hughes Brothers, Inc.
 IBEW, Local Union 111
 IEC Rocky Mountain
 IMCORP
 Incorporated County of Los Alamos Department of Public Utilities
 Interstate Electrical Contractors, Inc.
 Irby
 James Industries, Inc.
 Kansas City Board of Public Utilities
 KD Johnson, Inc.
 Kiewit
 Kit Carson Electric Cooperative
 KnowledgeVine, LLC
 La Junta Municipal Utilities
 La Plata Electric Association, Inc.
 Lamar Utilities Board
 Lamons
 Las Animas Municipal Light & Power
 Lewis Associates, Inc.
 Liberty Industrial Group Inc.
 Lincoln Electric System
 LiveEO, Inc.
 Longmont Power & Communications
 Loup River Public Power District

Current RMEL Members

Loveland Water & Power
 M&S Engineering;
 MasTec Clean Energy & Infrastructure
 Merrick & Company
 Missouri River Energy Services
 Mitsubishi Power Americas, Inc.
 Morgan County Rural Electric Assn.
 Mosaic
 Mountain Parks Electric, Inc.
 Mountain View Electric Association, Inc.
 Mycoff Fry Partners LLC
 National Powerline LLC
 National Renewable Solutions
 Navopache Electric Cooperative, Inc.
 Nebraska Public Power District
 NEI Electric Power Engineering, Inc.
 NextEra Energy Resources
 NFront Consulting LLC
 Nooter/Eriksen, Inc.
 Norris Public Power District
 Northeast Community College
 Northeast Nebraska Public Power District
 Northwest Rural Public Power District
 Olsson
 Omaha Public Power District
 Onward Energy
 Osmose Utilities Services, Inc.
 PacifiCorp
 Panhandle Rural Electric Membership Assn.
 PAR Electrical Contractors, LLC
 PAR Western Line Contractors, LLC
 Peak Utility Services Group
 Peterson Company
 Pike Engineering
 Pinyon Environmental, Inc.
 Pioneer Electric Cooperative, Inc.
 Pipefitters Local Union #208

Platte River Power Authority
 PNM Resources
 Poudre Valley Rural Electric Assn.
 Power Contracting, LLC
 POWER Engineers, Inc.
 Power Equipment Specialists, Inc.
 Power Pole Inspections
 PRE, Inc.
 Preferred Sales Agency, Ltd
 Primary Energy
 PSM (Power System Mfg., LLC)
 Quanta Services
 RS Electric Utility Services
 S&B Engineers and Constructors
 S&C Electric Company
 Safety One Training International, Inc.
 San Isabel Electric Association, Inc.
 San Miguel Power Assn.
 Sangre De Cristo Electric Assn.
 Sargent & Lundy
 Savage
 Schweitzer Engineering Laboratories
 SeeKing HR
 Sellon Forensics Inc.
 Shannon Communications Group
 Shermco Industries
 Siemens Energy Inc.
 SMTX Utilities
 Solomon Associates
 South Central PPD
 Southeast Colorado Power Assn.
 Southeast Community College
 Southern Pioneer Electric Company
 Southwest Public Power District
 Southwire Company
 Springville City Power
 SPR
 St. George Energy Services

Department
 Stanley Consultants, Inc.
 Sturgeon Electric Co., Inc.
 Sulphur Springs Valley Electric Cooperative
 Sunflower Electric Power Corporation
 Taber International, LLC
 Technically Speaking, Inc.
 Tenaska Marketing Ventures
 TG Advisers, Inc.
 The Empire District Electric Company
 Towill, Inc.
 Tri-State Generation and Transmission Assn.
 Ulteig Engineers, Inc.
 United Engineers & Constructors, Inc.
 United Power, Inc.
 UNS Energy Corporation
 Utility Telecom Consulting Group, Inc.
 Verve Industrial Protection
 Wartsila North America, Inc.
 Webster Associates
 West Peak Energy, LLC
 Western Area Power Administration
 Western Line Constructors Chapter, Inc. NECA
 Westwood Professional Services
 Wheat Belt Public Power District
 Wheatland Electric Cooperative
 Wheatland Rural Electric Assn.
 Wheeler Power Systems
 White River Electric Assn., Inc.
 Wilson & Company, Engineers & Architects
 WSU Energy Systems Innovation Center
 Xcel Energy
 Y-W Electric Association, Inc.
 Yampa Valley Electric Association, Inc.
 Zachry Group



MADE IN AMERICA, BUILT FOR THE WORLD

HilliardBrakeSystems.com



Hilliard Products are
Made in the USA.

IDENTIFYING AND ADDRESSING CONVEYOR IDLER ISSUES

by Todd Swinderman, p.e.

Proper tracking reduces the risks associated with spillage

On any belt conveyor system that moves bulk materials, the belt must run straight and true to maximize its life, minimize fugitive material and safety hazards, and achieve high system efficiency. The consequences of a mistracking belt can be costly, especially with increased maintenance. Even a slight belt misalignment can lead to a variety of issues, from small annoyances to full-blown catastrophes.

The most obvious effects include coal spillage and float dust that require personnel to do cleanup, which is unproductive work that also introduces risks from activities in close proximity to the moving conveyor. Spillage from non-centered coal often gets into idlers and pulleys, reducing bearing life and causing them to seize, leading to friction damage on the belt and potentially starting a fire.

A misaligned belt can also come in contact with the stringer, causing fraying, shredding or splice damage. Great lengths of valuable belting can be destroyed with surprising speed, and even the support structure itself can be damaged. A compromised bracket or support

can cause a catastrophic idler failure, which could damage other components of the system and require extensive downtime to repair. Further, there is potential for injury from a damaged belt or loose idler, not to mention the increased exposure to injury from too frequent a need to clean.

"I've been working around conveyors for 20 years, and I've seen thousands of belts," Martin Engineering Process Engineer Dan Marshall said. "I've seen just about every problem that can be caused by a mistracking belt, but one thing I've never seen is a belt that runs true right out of the box. All conveyors, no matter how well designed and built, have some belt wander."

A wide variety of circumstances can lead to mistracking, and operators have tried many things to correct the alignment. Some have elected to place an obstacle such as a block of wood in the belt path, so it won't travel too far out of line. This occasionally improves the situation, but more often it's just temporary, and the belt will eventually slice through the obstacle.

Many operators have realized



that pivoting an idler is a quicker and more effective way to steer a belt. This common approach is called "knocking an idler," striking it with a hammer to move it slightly and realign the belt. Equipment manufacturers have also designed components to help align a belt, and these solutions can be successful in specific applications. They include specially-shaped rollers, angled idlers and devices that apply

pressure to the belt edge to push it back in line. "While these mechanisms can improve a belt that's consistently off-center in one direction, they do not react to dynamic belt movement, meaning that they don't correct intermittent belt wander," Marshall said. "To combat such changing conditions, engineers designed the tracking idler. Unlike the edge correction approach, the device senses belt movement in either

direction, and pivots the idler slightly to steer the belt back into position. It doesn't apply a great deal of force to the edges, which can damage a belt and splices. When the belt is running true, it remains centered, and when it senses a misaligned condition, it gently corrects the belt."

Unfortunately, to accommodate limited space availability, tracking idlers typically have short sensing arms. This requires a fairly large belt displacement to create a small movement of the idler. While these designs do tend to improve tracking, there are limits to how much correction they can deliver, and short sensing arms can actually pinch a belt if the idler pivots too far. To combat this, some operators choose to "tie off" a tracking idler to limit its movement. While the practice can help preserve the belt, it doesn't address significant mistracking.

To overcome the limitations of existing belt alignment devices, Martin Engineering has invented and patented a Multi-Pivot Belt Tracker (above), which employs sensors, pivoting idlers and geometry to align a wandering belt. The sensors avoid pinching the belt, and the engineered geometry amplifies any detected misalignment to create a greater pivot.

Multi-Pivot Belt Trainers use longer arms than other designs, positioning the guide rolls further from the pivot roller, as well as closer to the belt edge. The closer proximity allows

guide rolls to sense very slight misalignments and make immediate corrections. Rather than waiting for a powerful mistracking force, the longer arms require considerably less pressure to move the pivot roller. The result is better correction with no pinch points and less wear on conveyor and tracking equipment, for longer and more efficient service life. Specific designs are available for both the load-carrying belt path and the return run.

"Installing trackers is the economical solution, but operators should do a full analysis and consider also addressing other causal issues," Marshall added. "By focusing solely on belt alignment, plant personnel may miss other opportunities to increase production and relieve some of the burdens on their system."

Keeping the belt centered and moving quickly is the key to high production, controlled operating cost and a safer workplace.

"Misalignment causes downtime and costs money," Marshall said. "But nothing causes more downtime and expense than a destructive belt fire or other catastrophes as a result of inattention to mistracking problems."

R. Todd Swinderman, P.E., is CEO Emeritus for Martin Engineering. Previously serving as president, CEO and chief technology officer, he has authored dozens of articles and papers, presented at conferences and customer facilities around the world, and he holds more than 140 active patents.



SCANTECH

Process control specialists

On-line Real Time Analysis for Process Control

- Coal
- Coke
- Iron Ore
- Industrial minerals
- and many others

Over 850
units installed
in 51 countries

Contact us for advice:
Tel: +61 7 3710 8400
Fax: +61 7 3710 8499
www.scantech.com.au
sales@scantech.com.au

COALSCAN



COALSCAN THROUGH BELT ELEMENTAL ANALYSER



CM 100 COKE MOISTURE MONITOR

TBM 200 SERIES MICROWAVE MOISTURE MONITOR



Shut down coal plants? That's lights out for us

By: Jim Constantopoulos



It's becoming clearer that the United States can follow two possible roads in the fight to achieve a livable environment.

One is to shut down the nation's coal plants, as President Biden advocates, and allow electricity-generating facilities worth billions of dollars to sit idle. To provide replacement power, utilities must build replacement natural gas plants. But the price of natural gas has nearly tripled in the past year, while the cost of thermal coal has increased only modestly. And the price of gas is likely to keep rising. Though renewables are desirable, politicians must stop pretending that wind and solar are easy solutions. Rapid deployment of intermittent wind and solar power without technology for energy storage on the electricity transmission system would condemn millions of Ame-

ricans to a shortage of electricity, rolling blackouts, and industrial shutdowns. And this could potentially affect us here in eastern New Mexico following the recent announcement by Xcel Energy to shutter the nearby Tolk generating station by 2028.

While they cite water availability as the reason behind closing the station, Xcel is on a mission to end its use of coal by 2030. The Tolk station will continue to serve customers using synchronous condensers. What does that mean? As fossil fuel power plants are retired and replaced with intermittent wind and solar, the electrical grid becomes susceptible to instability. These systems serve several functions, including providing inertia to the grid to keep the electrical frequency and grid voltage stable. The second road is to continue



using coal as part of a diverse mix of fuels until something comes along that gives way to its replacement. True, with enough ingenuity and capital, energy storage would potentially transform wind and solar into key sources of power, supplying electricity around the clock and on days when the wind isn't blowing and the sun isn't shining. But that will take time and resources. Until that day, wind and solar will be supplemental, requiring backup power from fossil fuels.

But what about carbon dioxide emissions? Traditional carbon capture and storage has proven to be too expensive. However, the National Institute of Standards and Technology recently announced the discovery of an inexpensive new material, aluminum formate, that is highly effective at removing CO₂ from flue gases. More research is required, but the results are very promising.

In reality, wind and solar combined account for only 12% of the nation's electricity-generating capacity. In contrast, coal and natural gas supply 61 percent and nuclear power 19 percent. It is time for our political leaders to stop posturing on energy production.

Even as wind and solar grab most of the attention, the real story of late has been the continuing importance of coal. One reason there were no serious energy shortages in the U.S. this past summer is because more than 40 coal plants targeted for closure over the next year were kept online -- and now will remain in operation for up to five years. Producing nearly 17 gigawatts of power, these plants will help ensure reliability and an adequate supply of electricity.

With the growing electrification of our economy, it would be irresponsible not to plan for a future in which we will need more power, not less. A balanced mix of fuels will be required to keep the lights on and assembly lines humming. Shutting down coal plants before replacement energy becomes available would wreck the nation's electricity system and the economy.



EVENTS

NCTA (NATIONAL COAL TRANSPORTATION ASSOCIATION)

December 30, 2022

**UMLER Waivers must be returned
to NCTA**

May 8 – 10, 2023

**NCTA Operations & Maintenance
Conference**

The Scott Resort & Spa
Scottsdale, Arizona

May 9 – 11, 2023

NCTA Spring Conference

The Scott Resort & Spa
Scottsdale, Arizona

September 18 – 20, 2023

**NCTA 49th Annual Business Meet-
ing and Conference**

Cheyenne Mountain Resort
Colorado Springs, CO

ACAA (AMERICAN COAL ASH ASSOCIATION)

January 31 – February 1, 2023

**ACAA 2023 Winter Mem-
bership Meeting**

Rosen Plaza Hotel,
Orlando, Florida

ASRS (AMERICAN SOCIETY OF RECLAMATION SCIENCES)

June 4 – 7, 2023

40th Annual Meeting

Boise Centre
850 W Front Street
Boise, ID

RMEL

December 15, 2022

**Planning Session: 2023 Fall
Convention**

SRP's Power Operations Building,
Mesquite Conference Room
6504 E. Thomas Road
Scottsdale, AZ 85251

January 18, 2023

**Workshop: Introduction to the
Electric Utility**

Hilton Denver Inverness
200 Inverness Drive West
Englewood, CO 80112

AMERICAN COAL COUNCIL

December 5 – 6, 2022

Coal Trade Conference

March 6 – 8, 2023

SPRING COAL FORUM

Hyatt Regency Clearwater Beach
Clearwater Beach, FL

August 8 – 10, 2023

COAL MARKET STRATEGIES

Chateaux Deer Valley
Park City, UT

**TO SUBMIT MORE EVENTS FOR PUBLISH OR TO INCLUDE
INFORMATION ABOUT YOUR ORGANIZATIONS CALENDAR OF
EVENTS, PLEASE EMAIL
INFO@MARTONICKPUBLICATIONS.COM . THANK YOU.**

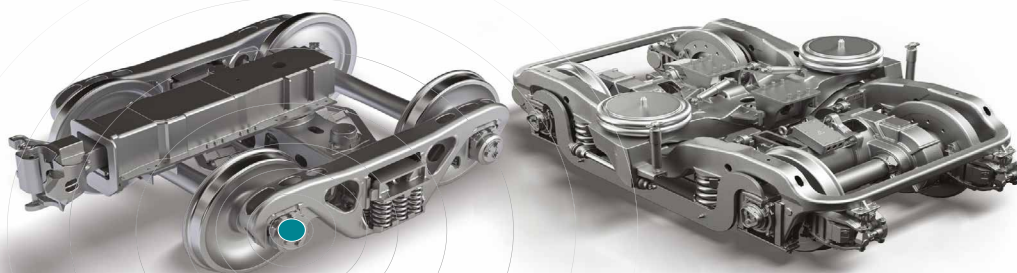
Unmatched scope of **INTEGRATED** systems

GLOBAL leaders in reliability

IoT platform drives fleet **VISIBILITY**

Performance-driven **SOLUTIONS**

A century of **INNOVATION**



TRAIN SMARTER

FREIGHT | TRANSIT | DIGITAL

amstedrail.com

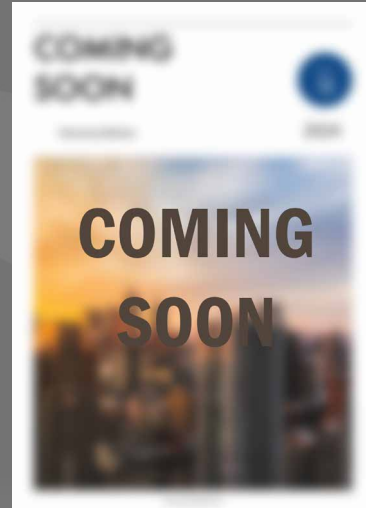
Amsted Rail

UPCOMING ISSUE

UPDATED MEMBER DIRECTORIES

WORLD NEWS

UPCOMING 2022 MEMORIAL

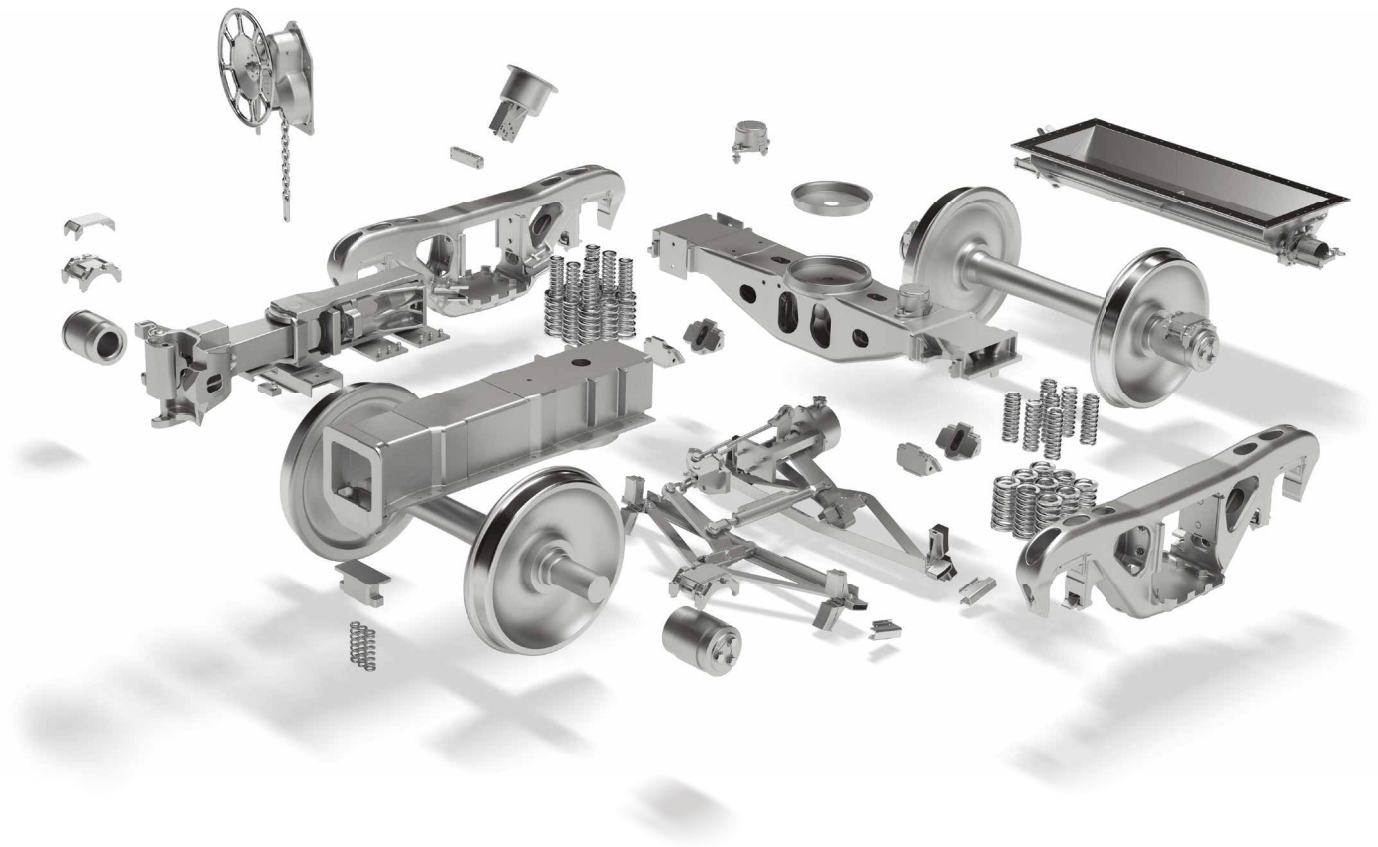


INDEX TO ADVERTISERS

Amsted Rail	42-23-OBC	www.amstedrail.com
Borton, L.C	28	www.borton.biz
Comet Industries	26	N/A
Carolina Drill Suply	09	www.carolinadrillsupply.com
Consolidated Terminals LC	10	https://www.cctlconline.com/
Cathcart Rail	20	https://www.cathcart-rail.com/
Elgin Seperation Solutions	22	www.elginseparation.com
Fly Ash Direct	29	www.flyashdirect.com
Freightcar America	14	www.freightcaramerica.com
Jabo Supply Corporation	18	http://www.jabosupply.com/
Konnx Inc	17	https://konnx.net/
Progress Rail	12	https://www.progressrail.com/
Scantech	39	www.scantech.com.au/
Son Haul Inc	16	www.son-haul.com
Snoby Separation Systems	19	www.snobyllc.com
Terra Source Global	08	https://terrasource.com/
The Hilliard Corporation	37	https://www.hilliardcorp.com/
Utter Construction, Inc	07	http://www.utterinc.com/

MORE THAN PARTS. PERFORMANCE.

Amsted Rail, the global leader in fully integrated freight car systems for the heavy haul rail market.



TRAIN SMARTER

FREIGHT | TRANSIT | DIGITAL

Amsted Rail[®]

amstedrail.com