Q3, 2026

Coal Energy

FROM THE MINE TO THE UTILITY



EPA REPEALS GHG REQUIREMENTS

2027 US COAL SHOW

CAT'S D11 XE

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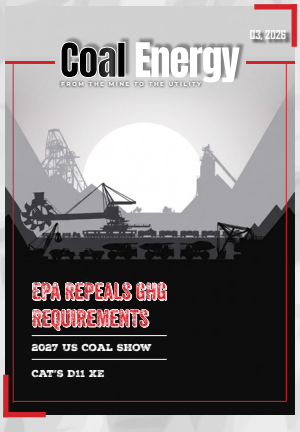
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LETTER FROM THE PUBLISHER



Dear readers,

As we move past the third quarter of 2026, the landscape of our industry continues to evolve with significant momentum. At ***Coal Energy,*** we remain dedicated to providing you with the insights, updates, and analysis necessary to navigate this shifting environment.

In this issue, we highlight a major development regarding energy policy. We cover the recent actions taken by the US EPA to revoke power plant rules, specifically repealing the majority of federal carbon emission requirements. This policy shift is a significant pivot for the sector, with recent estimates suggesting that these changes could result in approximately $310 billion in cost savings across the industry.

Looking ahead, we are excited to turn our attention to the upcoming US Coal Show 2027. We are pleased to announce that the event is scheduled for June 15-17, 2027. As always, this remains a premier opportunity to connect with peers, discuss emerging trends, and view the latest technological advancements in our field. We look forward to seeing many of you there as we gather to strengthen our community.

Technological progress is also at the forefront of this quarter's coverage. We take an in-depth look at the recent trial of the CAT D11 XE at the Red Hills Mine. As the new electric drive model of the iconic dozer, the D11 XE represents a significant step forward in heavy equipment efficiency, and we are eager to share findings on how this machine is performing in a real-world mining environment.

Reflecting on our growth, we want to express our pride in the community we serve. Our readership continues to be comprised of key members from the nation's largest coal-related associations and organizations. Your commitment to industry excellence is what drives us to maintain the highest standards of reporting and analysis.

Finally, we want to extend a sincere thank you to our advertisers. Your continued support allows us to bring this valuable content to the coal sector, fostering connection and innovation across the entire industry. We are equally grateful to our readers. Thank you for your ongoing engagement and for trusting us to keep you informed.

Warmest regards,

Maria Martonick

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Association Comparisons



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Mission:

The NMA's mission is to build support for public policies that will help Americans fully and responsibly benefit from our abundant natural 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
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The mission of the NCTA is to provide education and facilitation for the resolution of coal transportation issues in order to serve the needs of the general public, industry, and all modes of transportation. This is accomplished through the sponsoring of educational fora and providing opportunities for the lawful exchange of ideas and knowledge with all elements of the coal transportation infrastructure.



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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 in advocating for coal as an economic, abundant and environmentally sound critical resource.

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.



www.futurecoal.org

FUTURECOAL

FutureCoal represents industry leaders, committed to building a sustainable future for global coal.



www.alltricitynetwork.org

ALLTRICITY NETWORK

Mission:

Preparing the electric utility industry for the future through education and networking.

Since 1903, Alltricity Network has been a member-driven association. Employees from member companies shape the organization by serving on Education Committees, presenting at events, contributing to publications, and sharing meaningful feedback.

This member-driven approach fuels our growth, as members advocate for the association by bringing colleagues to events, where they discover valuable content and a supportive community. Electric utility professionals rely on Alltricity Network for the resources and insights they need to succeed. Through collaboration and shared expertise, members advance the industry and prepare for the future together.



US EPA Revokes Biden-Era Power Plant Rules with $310B in Estimated Savings

The US EPA announced the decision at the G20 Energy Abundance Ministerial in Houston, targeting Biden-era GHG rules.

By: Shree Mishra

The US Environmental Protection Agency (EPA) has repealed most carbon emission standards for coal and gas-fired power plants, estimating that the changes will save $310B.

Announced by EPA Administrator Lee Zeldin at the G20 Energy Abundance Ministerial in Houston, Texas, the repeal targets greenhouse gas (GHG) requirements introduced under Joe Biden's administration.

The EPA stated that the 2024 Carbon Pollution Standards required technologies it views as not adequately demonstrated, alleging that these regulations forced power plants to close rather than using achievable controls.

The agency argued that the rules went beyond its authority under the Clean Air Act (CAA) and did not account for the Supreme Court's West Virginia v. EPA decision, which restricted the EPA from enacting measures that significantly reshape the power sector.

Alongside the repeal, the EPA has proposed rescinding all remaining GHG standards for the power sector.

If adopted, the agency estimates the proposal will save a further $370m in direct compliance costs.

Zeldin said: **"For over 15 years, the Obama and Biden administrations implemented a war on coal to destroy reliable and affordable energy. The Trump Administration has come in to protect American energy and to make sure you can afford to keep the lights on. Americans will see a decrease in electricity prices, but this is just the beginning. We are working to go even further so that American energy can be fully unleashed. Realising the full potential of American energy means more jobs, lower prices and a more prosperous America."**

The EPA's action follows the repeal of the 2009 Endangerment Finding and recent Supreme Court rulings, with the agency stating that Section 111 of the CAA does not permit regulation of emissions specifically to address climate change.

During the announcement, Administrator Zeldin was joined by Doug Burgum, Secretary of the US Department of the Interior and Jarrod Agen, executive director of the National Energy Dominance Council.

The EPA said coal production for generating electricity could increase substantially under the new regulatory environment.

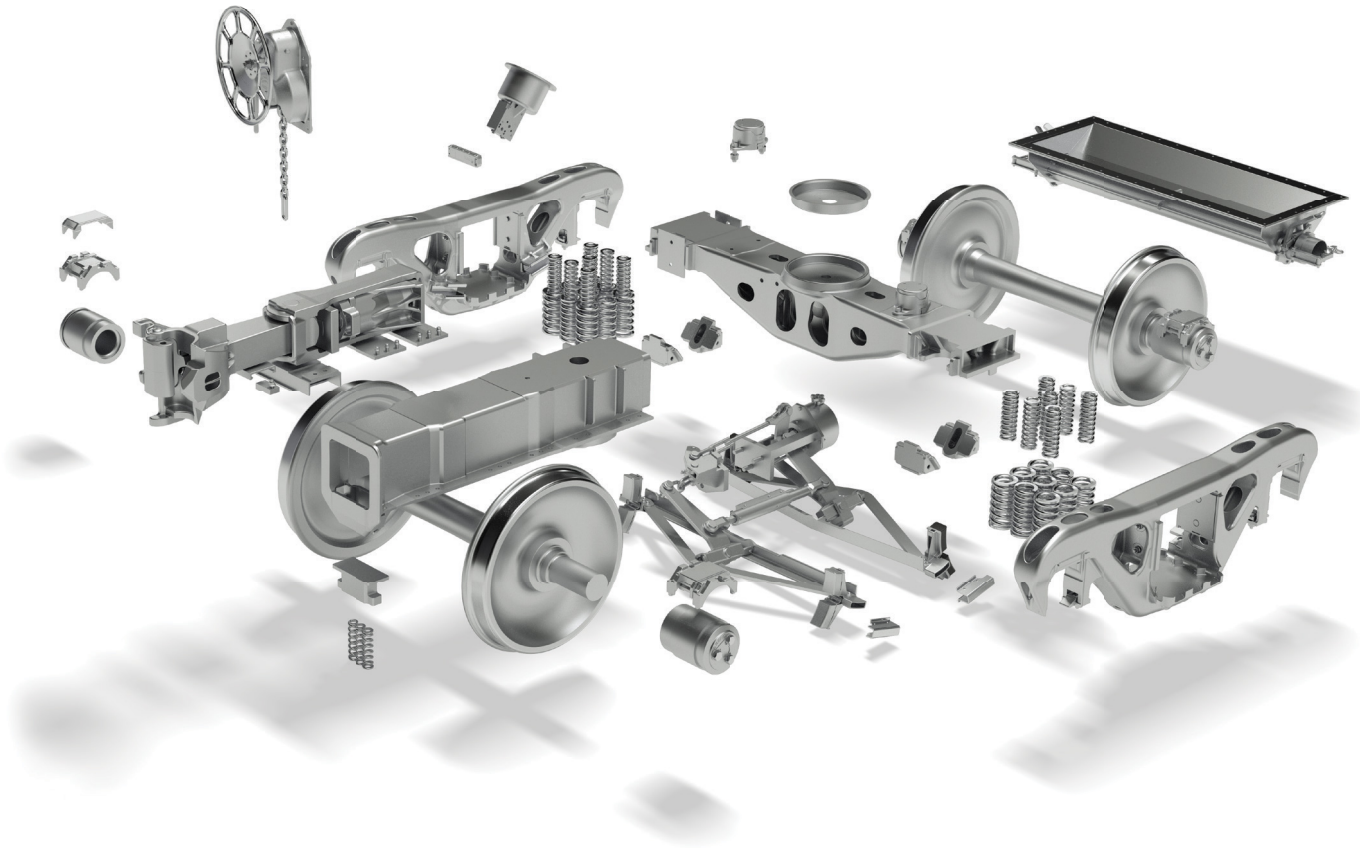
The agency announced plans for a public hearing 15 days after the action appears in the Federal Register, followed by a 45-day comment period.



The EPA has proposed rescinding all remaining GHG standards for the power sector.

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G20 ENERGY ABUNDANCE MINISTERIAL CONCLUDES WITH FOUR CONSENSUS OUTCOMES



On Wednesday, September 16th, 2026, G20 Energy Ministers concluded the Energy Abundance Ministerial in Houston, Texas. The Ministerial was hosted by the White House National Energy Dominance Council (NEDC), the Department of the Interior, the Department of Energy, and the Environmental Protection Agency.

At the conclusion of the Ministerial, G20 Ministers reached consensus on four outcomes advancing energy access, infrastructure development, water resilience, and supply chain security. The outcomes advance the Energy Abundance Working Group's three pillars: Energy Security and Affordable Baseload, Permitting and Regulatory Efficiency, and Critical Minerals and Resilient Supply Chains. Together, they support the common sense solutions that President Trump has championed to increase energy availability, speed the development of critical infrastructure, strengthen water resilience, and reduce vulnerabilities in the supply chains essential to modern economies.

Ministers reached consensus on deliverables that support affordable, scalable, and context-specific pathways to expand household energy access, including the use of liquefied petroleum gas, or LPG, where it is a reliable and scalable means of rapidly displacing traditional biomass. They also reached agreement on Permit-

ting and Regulatory Efficiency to encourage more efficient, predictable, and effective domestic permitting and regulatory processes, and a Water Reuse Initiative outlining voluntary, fit-for-purpose water reuse to strengthen resilience for communities, energy production, manufacturing, agriculture, and other critical sectors. Finally, Ministers agreed in the Critical Minerals Statement on voluntary cooperation to build resilient, affordable, secure, and diversified critical minerals value chains through information sharing, innovation, investment, capacity building, and local value addition.

"The world cannot build secure energy systems, advanced manufacturing capacity, or digital infrastructure on fragile mineral supply chains," said Secretary of the Interior Doug Burgum, Chair of the National Energy Dominance Council. **"The consensus reached in Houston supports a common sense approach: diversify supply, strengthen domestic and regional capacity, encourage investment and innovation, and respect each nation's sovereignty over its natural resources. These steps will help reduce overreliance on any single supplier while creating more durable supply chains and greater economic opportunity."**

"Energy is the essential ingredient that enables everything we do," said Secretary of Energy Chris Wright. **"A highly energized society brings health, wealth, and opportunity. The consensus reached in Houston advances cooperation to expand the affordable, reliable, and secure energy, infrastructure, and supply chains needed to support prosperity, resilience, and opportunity throughout the world."**

"President Trump's energy abundance agenda reflects reality – strong environmental stewardship and economic prosperity go hand in hand," said Environmental Protection Agency Administrator Lee Zeldin. **"The consensus reached in Houston advances solutions that streamline processes without sacrificing safeguards, expand water resilience, and enable the infrastructure needed to deliver reliable and affordable energy. This is how the G20 can support growth, protect communities, and meet the demands of the future."**

The investments and agreements announced in Houston demonstrate how President Trump's energy abundance agenda is creating jobs, delivering economic opportunity, strengthening American manufacturing, and expanding the energy infrastructure needed to power the future. The Japanese company Hitachi Energy announced a $528 million investment to build a new power transformer manufacturing facility in Gallman, Mississippi, expected to create 654 new jobs. Houston-based Caturus announced a five-train expansion of its Commonwealth LNG export facility in Louisiana that would add 7.75 million tonnes per annum of capacity and nearly double the project's planned capacity to approximately 17.25 million tonnes per annum, Continental Resources signed a memorandum of understanding with Venezuela's PDVSA to develop and operate the 126,000-acre Ayacucho 2 Block in the Orinoco Belt, which Continental estimates contains approximately 30 billion barrels of oil.

At the Ministerial, Administrator Zeldin announced the EPA's repeal of the majority of the Biden Administration's greenhouse gas requirements for U.S. power plants, the largest power sector deregulatory action in American history. EPA projects the repeal will save $310 billion and help unleash America's vast energy resources, including coal and natural gas. The Administrator also proposed to repeal the remaining power sector standards, which would save an additional $370 million in direct compliance costs. Together, these actions will restore reliable, affordable baseload power and strengthen American energy dominance.

Representatives from the following nations and unions were present at the three-day Ministerial: the African Union, the Argentine Republic, the Commonwealth of Australia, the Federative Republic of Brazil, Canada, the People's Republic of China, the European Union, the French Republic, the Federal Republic of Germany, the Republic of India, the Republic of Indonesia, the Italian Republic, Japan, the United Mexican States, the Republic of Poland, the Russian Federation, the Kingdom of Saudi Arabia, the Republic of Korea, the Republic of Türkiye, and the United Kingdom of Great Britain and Northern Ireland.





America's $180M Investment in Mining Education







At the American Mining Industry Roundtable hosted at the State Department on August 7, President Trump announced over $180 million in mining school investments meant to bolster the American mining workforce.

The U.S. Department of Energy's (DOE) Office of Critical Minerals and Energy Innovation (CMEI) will invest approximately $100 million in 14 mining schools around the country to revitalize the next-generation workforce and double the number of graduates with mining, minerals and associated supply chain credentials.

The DOE's nationwide Providing Opportunities for Specialized Education in Critical Technologies (PROSPECT) initiative will expand educational opportunities and develop the skilled workforce needed to support the domestic production, processing, recovery and recycling of critical minerals.

"A strong domestic mining and minerals workforce is essential to powering America's future, strengthening our national security and ending our dependence on foreign adversaries for the materials that underpin modern energy, manufacturing and defense," said U.S. Secretary of Energy Chris Wright.

"Through the PROSPECT initiative, the Department is investing in the next generation of American engineers, scientists, and skilled workers who will help unleash American energy and ensure the USA remains the world's leading energy powerhouse."

While the Trump Administration didn't explicitly list the 14 recipients, representatives from each of the accredited U.S. mining schools were reportedly in attendance at the roundtable. Paul Johnson, president, Colorado School of Mines (CSM); and Kray Luxbacher executive director, School of Mining Engineering & Mineral Resources, University of Arizona both had a seat at the table.

Several mining schools have since issued statements claiming a portion of the investment, such as the Missouri University of Science & Technology, the South Dakota School of Mines and the University of Kentucky. Other universities reportedly receiving an investment from the DOE include the University of Texas at El Paso and Virginia Tech's Department of Mining and Minerals.

Of the remaining investment, over $80 million from the Department of War will go into three schools for major workforce development programs and technology innovation hubs to train the next generation of geologists, metallurgists and mining engineers, according to a statement from the White House. Those three schools include the Colorado School of Mines, the South Dakota School of Mines and Johns Hopkins University. John Hopkins does not offer degrees in mining engineering or metallurgy, but they do offer geology-related education in the form of a Bachelor of Arts (BA) in Earth and Planetary Sciences.

"Meeting the nation's growing demand for strategic and critical minerals requires a larger, highly trained workforce, deep expertise across the entire mineral value chain and the ability to innovate quickly – Colorado School of Mines has a proven record of delivering all three," said Colorado School of Mines President Paul C. Johnson. **"We thank President Trump and the Administration for this $32.7 million investment that will enable us to turn lab breakthroughs into market solutions while training the mining workforce America needs."**



American Coal Council Releases Bedrock and Calls on Industry to Amplify the Story of American Coal

American Coal Council Releases Bedrock, a New Film Celebrating the Men and Women of American Coal

The American Coal Council (ACC) is proud to announce the release of **Bedrock,** a powerful new 90-second film highlighting the hardworking men and women who mine American coal and the future they are helping to build.

Bedrock tells the story of an industry that has long served as a foundation of American energy, economic opportunity, and community strength. Through compelling visuals and authentic storytelling, the film showcases the people whose dedication helps provide the reliable, secure energy that supports millions of Americans every day.

"Coal miners and the communities they support remain the bedrock of America's energy strength," said Emily Arthun, Chief Executive Officer of the American Coal Council. **"This film is a tribute to the men and women whose work powers our nation and sustains local economies across coal-producing regions."**

The ACC developed Bedrock as a resource for the entire coal industry, and its impact will be greatest when industry leaders, companies, associations, employees, and supporters share it broadly.

Every share helps ensure that more people see the faces behind American coal and better understand the important role coal continues to play in supporting a reliable and resilient energy future.

WEST VIRGINIA LAWMAKERS AND REGULATORS PUSH TO PROTECT AGING COAL PLANTS

By: Steven Allen Adams



West Virginia Office of Energy Director Nicholas Preservati said the state is working with federal officials and regulators to find ways to make the state's coal-fired power plants last longer and operate more efficiently.

CHARLESTON – Lawmakers, state regulators and utilities are trying to ensure West Virginia's aging coal-fired power plants continue to provide base-load energy into the regional energy grid.

The Joint Committee on Energy and Public Works heard from officials with the Office of Energy, the Public Service Commission and the state's two electric utility companies about West Virginia's ability to provide coal-fired power to the PJM Interconnection, the regional grid that serves 13 states and Washington, D.C.

Nicholas Preservati, deputy secretary of the state Department of Commerce and director of the Office of Energy, said West Virginia is a key leader in the 13-state Governors' Collaborative, which is intervening with the Federal Energy Regulatory Commission to reform PJM governance. Preservati criticized PJM emergency rules that force local coal plants to throttle down due to west-to-east transmission congestion, as well as rapid plant cycling that shortens equipment lifespans.

"We have gone up and met with the White House, we've met with DOE (U.S. Department of Energy), we've met with every FERC commissioner, and we've met with PJM," Preservati said. **"We're working to protect West Virginia's interests at PJM because there's a lot of dissatisfaction the way it's being run."**

PJM coordinates the movement of wholesale electricity, dispatching the power it needs for the regional grid on a minute-by-minute basis using the least expensive fuel sources first. While coal is considered base-load energy, it is not always the least expensive.

PJM is primarily using natural gas and nuclear to meet base-load demand before dispatching coal due to the higher costs of operating aging coal-fired plants. According to a 2025 analysis by financial firm Lazard, coal-fired power costs consumers $122 per megawatt hour compared to $78 per megawatt power for natural gas.

Preservati said the state is working with federal partners, such as at the National Energy Technology Laboratory in Morgantown, to upgrade and extend the life of coal-fired energy in West Virginia.

"NETL is going to allow us to work with them to use their computing research, to work with the utilities to not only determine what upgrades need to be made, but to look at every process, start to finish, that affects the coal plant," he said.

FirstEnergy has invested $500 million over the last five years in its two in-state coal-fired power plants (Fort Martin, Harrison), while Appalachian Power has secured over

$87 million in federal grants and $116 million in low-interest loans for modernization, including at the Mitchell Power Plant in Marshall County.

"Maintaining and updating our power plants is critical," said David Ellis, the director of quality assurance at the Public Service Commission. **"We also have to maintain and update these plants because they're old. They're 50 years old ... And it's not just a question of being competitive. We need our power plants even if they sell nothing into the PJM market. Even if they solely use that power for our own customers."**

The PSC is implementing consumer economic dispatch rules required by House Bill 2014, the 2025 law dealing with data centers and microgrids. These rules mandate that utilities maintain plants to run at their lowest possible cost, targeting a 69% capacity factor when economical. Those rules were released for public comment on Monday, Sept. 28, at the PSC's headquarters in downtown Charleston.

"The commission has said consumer economic dispatch means maintaining each individual power plant based on the engineering of that power plant, based on the limitations of the transmission that it's connected to, (running) that plant so that it runs at its lowest possible cost," Ellis said. **"We'll be looking at the comments. We'll probably be putting out some amendments or changes to those proposed rules within the next month or two, and then eventually those will come to you all because they are legislative rules. They will have to come to the Legislature for approval."**

WEST VIRGINIA OFFICE OF ENERGY

FirstEnergy



RAMACO PREVAILS WITH CHUBB INSURANCE CLAIM

Ramaco Resources, Inc. announced that a federal jury returned a verdict awarding $30 million in damages to Ramaco Resources, LLC, a subsidiary of the company, in its insurance coverage lawsuit against Federal Insurance Co. and ACE American Insurance Co., both subsidiaries of Chubb Insurance. The trial was held in the Charleston Division of the U.S. District Court for the Southern District of West Virginia.

The lawsuit arose from the defendants' denial of Ramaco LLC's insurance claim following a partial structural failure of a raw coal storage silo at the company's Elk Creek preparation plant in November 2018.

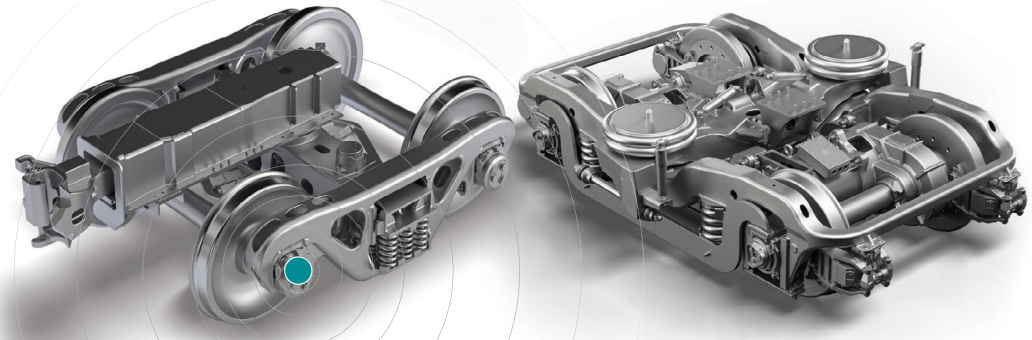
Ramaco LLC filed suit in August 2019, seeking a declaratory judgment that the silo collapse was an insurable event and required coverage under the applicable policy.

On September 25, 2026, following the new trial on damages, the jury determined by a preponderance of the evidence that Ramaco LLC should be awarded $2.5 million in damages for aggravation and inconvenience and $27.5 million in damages for net economic loss. Ramaco said the Court entered judgment in favor of Ramaco LLC and against defendant Chubb in accordance with the jury's verdict on September 25, 2026.

The jury's verdict resolved two of the three elements of damages in the matter. The remaining element – attorney's fees – was not decided by the jury and will be determined by the Court.

"The company is grateful to the jury for its careful consideration of the facts and for delivering a just verdict that recognizes the harm we suffered by the insurance carriers' wrongful delay in payment of a legitimate insurance claim that we filed in 2019," said Randall Atkins, chairman and CEO of Ramaco Resources.

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Komatsu Launches "The Future You Build Starts Here" Campaign



Komatsu has launched a new campaign highlighting its enterprise-wide workforce development strategies titled **"The future you build starts here."** The campaign ties together job openings and opportunities from its dealer network, as well as Komatsu-owned sites and facilities throughout the USA. The focus of the campaign is to look at opportunities in the heavy equipment industry as career jumping-off points that can grow into a lifetime of job satisfaction and development. Opportunities range from technicians and sales specialists to parts counter reps and office staff.

"Our approach to workforce development focuses on the holistic need to support our people, which better supports our customers' needs. That starts at the point of sale and continues with unrivaled service, support and solutions," says Grif Reome, director of technical workforce development, Komatsu North America. **"Many of our industry's leaders started in the trades, proving that technical careers can lead to amazing opportunities and long-term career development and growth. We see it as Komatsu's responsibility to enable those pathways and make them more visible to a broader network of people. It's about driving their career development from their first role and every role after; building the workforce our industry needs for the future."**

The campaign will drive activity at live events, on social media and online via the new career site. The overall message focuses on what's possible with a career in the skilled trades, with special focus on three key demographics: high school graduates, middle-aged or late career changers, and veterans returning to the workforce at the end of their military careers.

"We build up the person, and we will build up the vision for the career that can be possible for them," says Reome. **"And in doing so, we will build up the support community for Komatsu and its customers throughout the USA and beyond."**

DOE EMERGENCY ORDERS KEEP INDIANA COAL PLANTS OPERATING

U.S. Secretary of Energy Chris Wright and the U.S. Department of Energy (DOE) issued emergency orders to keep two Indiana coal plants operational to ensure Americans in the Midwest region of the USA have continued access to affordable, reliable and secure electricity. The orders direct the Northern Indiana Public Service Co. (NIPSCO), CenterPoint Energy and the Midcontinent Independent System Operator, Inc. (MISO) to take all measures necessary to ensure specified generation units at both the R.M. Schahfer and F.B. Culley generating stations in Indiana are available to operate.

The orders will minimize the risk of unnecessary blackouts for the American people, according to the DOE. Since the DOE's original orders were issued on December 23, 2025, the Schahfer and Culley coal plants have proven critical to MISO's operations, operating during periods of high energy demand and low levels of intermittent energy production, including during Winter Storm Fern.

"The availability of R.M. Schahfer and F.B. Culley generating stations to operate will continue to be an asset to maintain reliability in the MISO region and is necessary to address elevated reliability risks in that region during extreme weather and reduce the risk of power outages that could threaten public health and safety," the DOE said in a statement.

These orders are in effect beginning September 20, 2026, through December 18, 2026. The DOE issued a similar emergency order in June to keep the two Indiana coal plants operational, which expired on September 19, 2026. Certain generation units at these coal plants were scheduled to shut down at the end of 2025.

DOE Selects Four Projects for Mine of the Future Initiative Project



The U.S. Department of Energy's (DOE) Office of Critical Minerals and Energy Innovation (CMEI) selected four projects for $73 million in funding through DOE's Mine of the Future initiative to establish domestic testing grounds for innovative mining technologies. These selections will accelerate the commercialization of mining technologies, upgrade domestic mining capabilities and help secure the USA's critical minerals supply chains.

The DOE's Advanced Mining and Mineral Processing Technologies Office selected projects from Innovative Wireless Technologies Inc. (IWT), the University of Arizona, Southern Methodist University and Missouri University of Science & Technology (Missouri S&T) for award negotiations.

IWT's four-year initiative**, "Building the Mine of the Future: A Real-World Proving Ground for Autonomous Operations, Connected Systems & AI-Driven Mining Innovation,"** is anticipated to represent a total project value of nearly $25 million, with approximately $17.7 million expected to come from federal funding and the balance from matching contributions by IWT and its project partners, pending award negotiations. Led by IWT in partnership with Colorado School of Mines, Virginia Tech, the West Virginia Training and Conference Center, the University of Kentucky, Device Solutions, Phillips Global and other partners, the project will establish a national Mine of the Future proving-ground framework that integrates underground and surface mining environments.

The initiative will support applied research and demonstration across several critical technology areas, including secure wireless connectivity, workforce communications and tracking, advanced equipment monitoring, semi-autonomous and autonomous vehicle technologies and data-driven operational intelligence. IWT said that the resulting national-scale proving-ground capability will provide mining operators, equipment manufacturers, researchers and technology developers with a repeatable, secure environment to validate emerging technologies, accelerate innovation and strengthen domestic critical mineral production and long-term U.S. competitiveness.

"For more than two decades, we have served the mining industry with technologies designed to make operations safer, more connected and more informed," said Eric Hansen, CEO of IWT. **"The Mine of the Future closely aligns with IWT's technology roadmap and our vision for an increasingly intelligent, data-driven mining environment. This project provides an opportunity to accelerate that vision while working alongside government, industry and research leaders to advance technologies that strengthen operational awareness, improve safety and support the competitiveness of U.S. mining."**

The University of Arizona's project will create a nationally accessible underground testbed to speed up the development and deployment of advanced mining, electrification and energy management technologies, while Southern Methodist University's project will create the world's first synthetic mine within an advanced drilling and sensing test facility to accelerate next-generation mining technologies from lab concepts to field-ready deployment. Missouri S&T's project will create a multifunctional mining technology proving ground that combines two complementary facilities for underground technology testing and advanced comminution research.

The DOE said these projects will not only develop mining proving grounds but also support R&D projects that accelerate the progression of technologies from laboratories to testing and demonstration in a field-scale setting, an essential step to de-risk commercial adoption.

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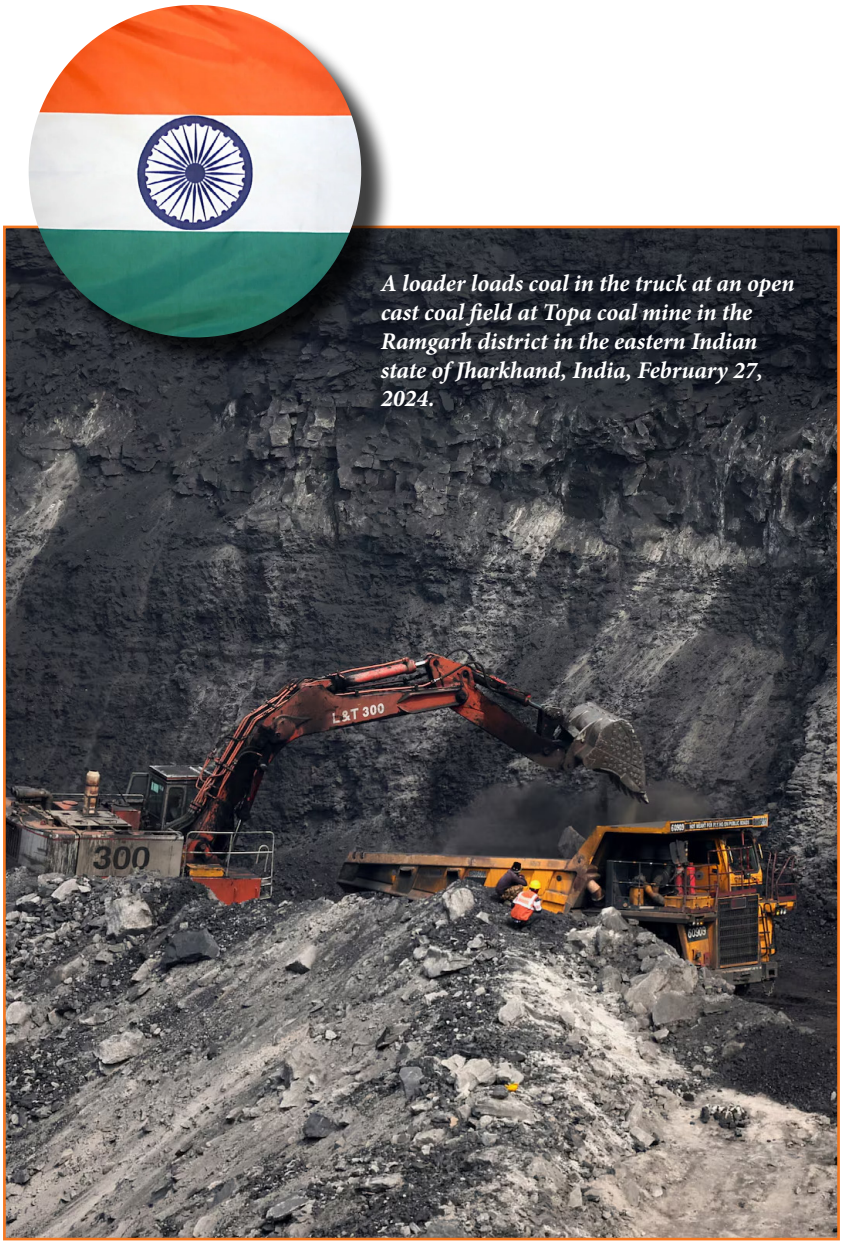
WORLD NEWS

India Orders Captive Coal Plants to Maximise Power Output on Surging Demand

By: Sarita Chaganti Singh and Sethuraman N R

NEW DELHI – India has ordered more than 100 captive coal-fired power plants to operate at maximum capacity from October 1 through year-end to meet what it expects will be a rise in electricity demand.

- The federal power ministry's order, invoked under emergency provisions of the Electricity Act, applies to plants with installed capacity of at least 50 megawatts.
- The aim is to meet an **"expected rise in electricity demand in the coming months,"** showed the order dated September 25 and seen by Reuters.
- Nearly 40% of coal-fired plants are operating with critically low fuel stock due to a surge in power demand as the El Niño climate phenomenon raises temperatures more than usual.
- The plants primarily serve industrial facilities such as aluminium smelters, steel manufacturers, cement factories and oil refineries.
- The power ministry has directed generators to sell surplus electricity through power exchanges.
- The order covers 112 plants belonging to companies including Vedanta, Tata Steel, Hindalco Industries, JSW Steel, UltraTech Cement, Reliance Industries, Indian Oil, Bharat Aluminium, Hindustan Zinc and Nayara Energy.
- The ministry has ordered plants to report weekly to the Central Electricity Authority detailing generation, captive consumption, power sales, available capacity and coal stocks.
- Separately, the ministry has extended an earlier emergency order requiring Tata Power's imported coal-fired plant in Mundra, Gujarat, to operate at full capacity until December 31, citing the demand situation.
- Section 11 of the Electricity Act allows the government, under extraordinary circumstances, to direct generators to operate power stations in accordance with its instructions.



A loader loads coal in the truck at an open cast coal field at Topa coal mine in the Ramgarh district in the eastern Indian state of Jharkhand, India, February 27, 2024.

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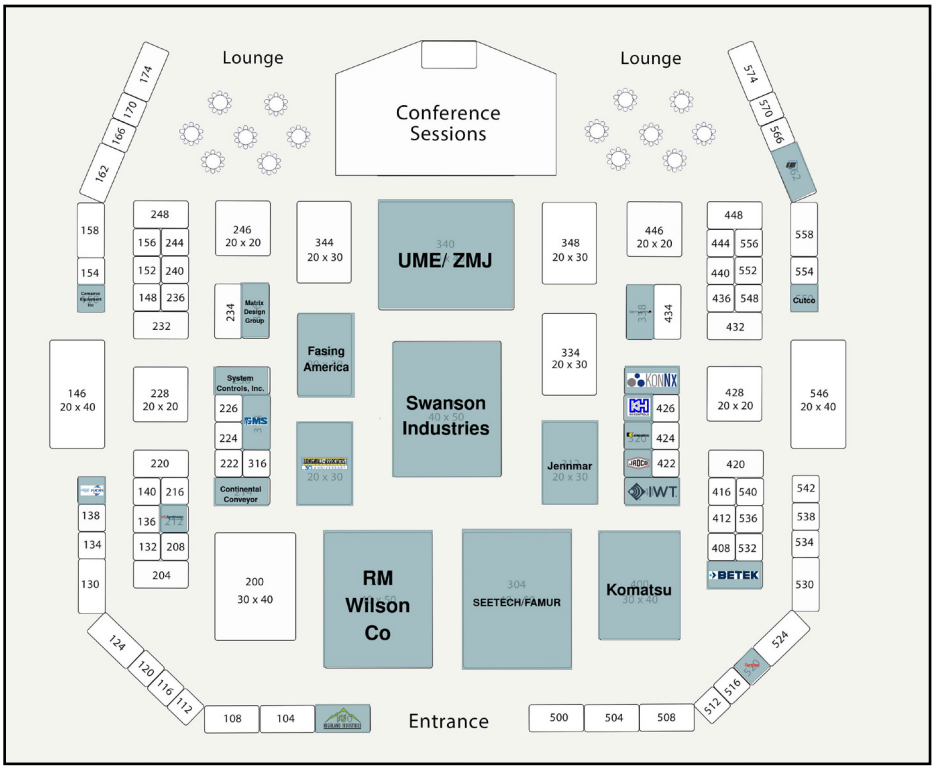
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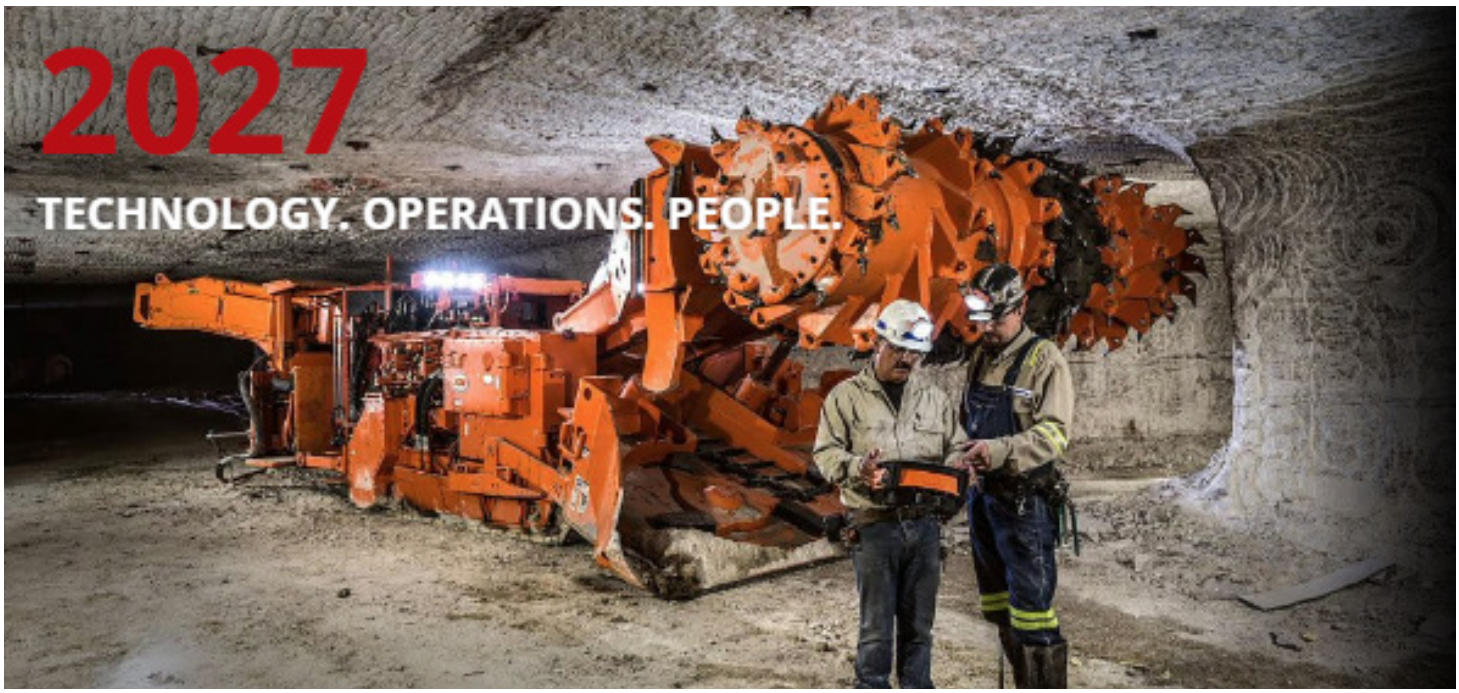
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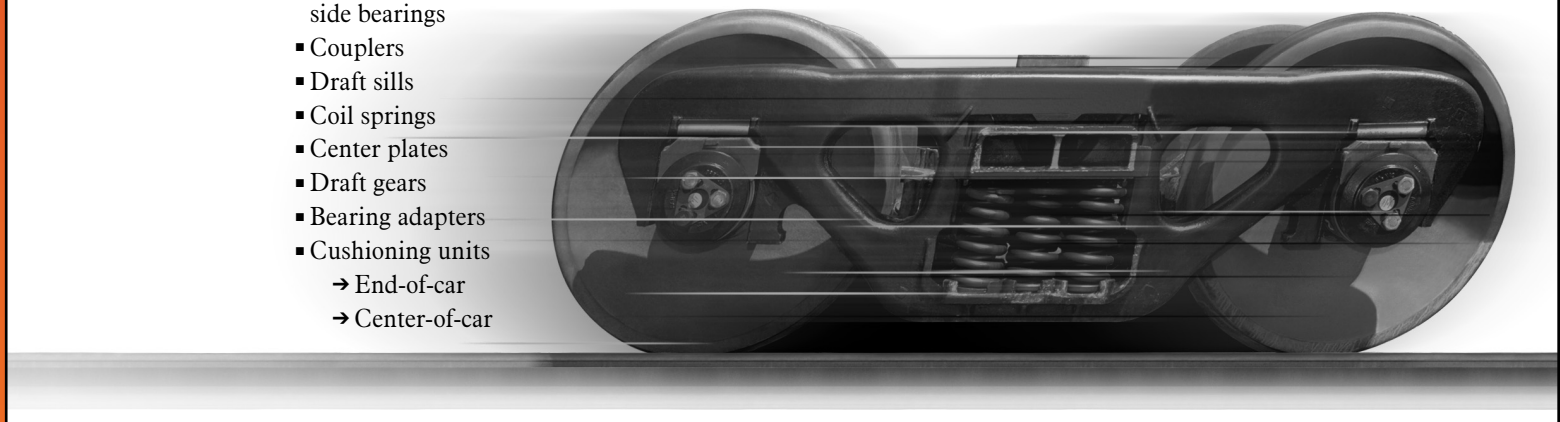
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Red Hills Mine Trials the Cat D11 XE

By: Steve Fiscor

The new electric drive machine offers fuel economy and improved operator control, while reducing wear and tear on the engine



The Red Hills mine extracts lignite from six seams in northern Mississippi and it worked with Caterpillar on a field follow for its D11 XE dozer.

A coal mine operating among the pines in northern Mississippi has been testing a new electric drive model of the Cat D11 dozer. Participating in what Caterpillar refers to as a field follow for the Cat D11 XE, mine management, the operators and the local dealer say they are impressed with the new machine. The mine may not want to return the machine.

The Red Hills mine near Ackerman, Miss., produces 2.5-3.2 million tons per year of lignite. North American Coal, a NACCO Natural Resources company, owns the mine and the equipment, and it supplies the coal to a nearby power plant, which is owned by an affiliate of Southern Company.

The horizon in which Red Hills operates has six relatively thin seams. The current stripping ratio is about 11:1. The top two seams are uncovered using trucks and shovels. The next two seams are uncovered by dozer push using the mine's four Cat D11 dozers. The interburden between the bottom two seams varies from 30 to 40 ft and the mine uses a Marion 8200 dragline (82 yd3) operating in a spoil-side configuration to uncover the bottom two seams.

The loading equipment consists of a P&H 2800 electric shovel (42 yd3), two Cat 6040 excavators operating as front shovels, one Cat 6040 operating as a hoe, a Cat 5230 operating as a shovel, and a Komatsu PC2000 operating as a hoe. The haulage fleet consists of 14 Cat 789 haul trucks and four Cat 785 haul trucks equipped with coal bodies. To mine the coal from all six seams, which vary from 2- to 4-ft thick, Red Hills uses two Wirtgen 4200 surface miners. The mine has enough reserves to operate for another 20 years or more.

As the active pit advances, the mine reclaims the land behind it. The dozers at Red Hills play a vital role in active mining and reclamation activities, explained Matt Jones, president and general manager for the Red Hills mine. **"We are currently working on a multi-year project to complete final reclaim of an older pit and create a lake for recreational use,"** he said. **"It will serve as sedimentation control for the new mining area for a few years. The dozers are knocking down the final pit spoils, filling in ramps and re-spreading oxidized material, in addition to normal mining operations."**

The dozing activity at Red Hills also made it an ideal candidate for the field follow testing for the Cat D11 XE. Not only would the machine see valuable time in the dirt, but Red Hills and Caterpillar could see firsthand how the machine performs next to traditional mechanical drive tractors operating in the same conditions.



With power on both sides versus pulling a steering clutch and dropping power, the operators claim the D11 XE can turn on a dime.

THE ELECTRIC DRIVE DESIGN

The Cat D11 dozer is celebrating its 40th anniversary in 2026. Caterpillar developed the machine in 1986 to meet demand for a larger, more powerful dozer. The first model, the Cat D11N, set new standards for power and efficiency. With each new D11 model released (D11R, D11T and D11), efficiency continued to climb. Caterpillar unveiled its plans for the D11 XE at MINExpo 2021 and it is expected to be 25% more efficient than the D11 and 40% more efficient than the D11N.

With the powertrain for the D11 XE, a generator sits directly behind the Cat C32B diesel engine. The transmission that sat on the back of the tractor case has been replaced by an inverter. Each side has an electric motor, brake and final drive.

"The drive motors are bolted to the final drives, which have been redesigned," said Tim Bowen, service operations manager for Thompson Machinery, the Cat dealer serving northern Mississippi and Tennessee. **"The D11 XE has no steering clutches. The brakes are the same. The only remaining mechanical aspect of the powertrain is the final drives themselves. They are slightly different. They still have the double planetaries on the outside and they use the same sprocket segments, but there is another planetary on the inside now that splines to the drive motors to transfer power."**

Caterpillar designed the D11 XE powertrain for 20% longer life (18,000 hours vs 15,000 hours) on the electric drive components, engine, final drives and hydraulics. The engine has a lower high-idle speed, and the D11 XE has increased cooling capacity versus the mechanical drive D11. The torque converter, transmission and bevel gear have been eliminated.

In addition to a 30% lower cost per hour, the machine should require one less rebuild than the D11 over the course of its life. Caterpillar placed six D11 XE's in the field, including the machine operating at the Red Hills mine.

DOZING EFFECTIVELY

The Red Hills mine tries to keep three or four machines working in the active mine dozer-push area. For them, that amounts to two Cat D11Ts, a D11R and the D11 XE. Some are equipped with carry blades. **"You really can't be productive with anything smaller than a D11,"** said Butch Davis, operations manager, Red Hills mine.

"When we started the field follow program for the D11 XE, there was a little reluctancy in the very beginning," Davis said. **"Some of the more experienced operators were not ready to make that leap into something new, but now they are just as satisfied as they were when they got on the first D11."**

The hesitation is understandable. Aside from being a brand new machine, the engine runs at lower speeds and loads. There are some new tricks to operating it (compared to the D11), especially when it comes to steering the machine. There's a pedal in the cab for "feathering" the electric drive where the decelerator used to be.

"We tend to do a lot of field follows here, not just for machines, but on modifications to machines, different pins, rollers, etc." Jones said. **"And this one,**



The field follow at the Red Hills mine provided a great opportunity to compare the Cat D11 XE side-by-side with mechanical drive dozers.

it was a particularly good fit because our production dozer fleet is typically four D11s pushing side-by-side in a slot dozing configuration. Caterpillar could not have found a better side-by-side comparison with two other models of D11. It's a perfect data gathering opportunity for Caterpillar."

When asked about the Cat D11 XE's best attributes, the Red Hills team said better fuel burn immediately in unison. **"We have not completed an official study, but we know the fuel burn has improved significantly,"** Davis said.

"Operator comfort is important and the operators like the cabin," Davis said.

The XE is not as jerky, Davis explained, turning the dozer is a smoother transition because it has power on both sides versus **"pulling a steering clutch and dropping power."** That helps production wise when they cut the highwall. They are able to power turn versus a negative force turn.

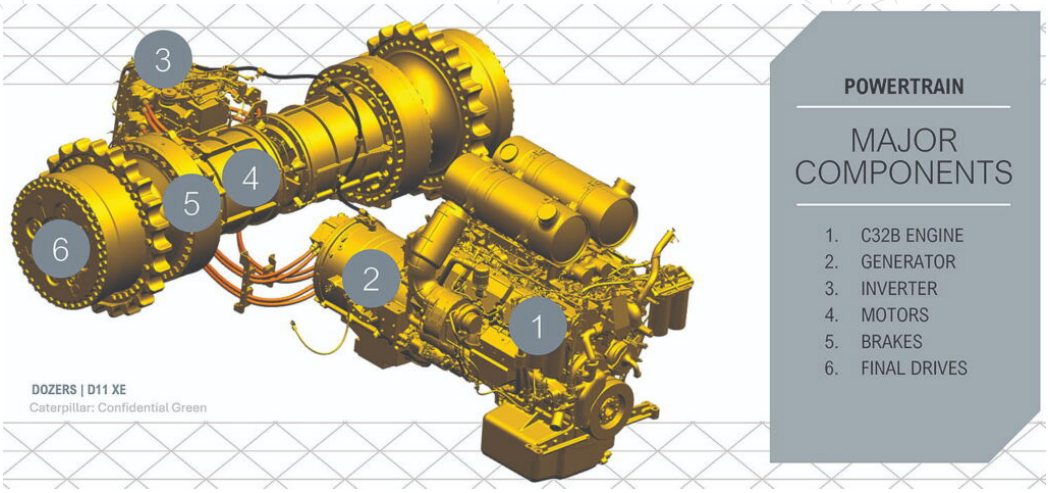
"With constant power to both tracks, the difference is night and day as far as how smooth it operates in tight spaces," Bowen said.

"When you're pushing in a slot, you tend to bite in on one side a little more than the other," Davis said. **"The tendency is for the machine to be drawn into the highwall. The operators can force their way out of that a little easier. The machine has a smoother overall operation. We also have had positive comments as far as the balance of the electric drive being better than the mechanical drive machines."**

The D11 XE has a split gear. In addition to a first, second, and third gear, it has a 1.5 gear. The 1.5 is a comfortable speed, and the operators can also drop down if the digging conditions change.

"The operators will all tell you that they are not getting fuel nearly as often as they used to," Jones said. Red Hills has four crews running two 12-hr shifts per day, 24/7, and the dozers might be able to go the entire 12-hour shift without refueling, whereas the mechanical drives would refuel at some point during the shift.

The transmission on the D11 XE has been replaced by an inverter and a generator. Each side of the dozer has an electric motor, brake and final drive.



FEWER MOVING PARTS, LESS MAINTENANCE

A transmission has a tremendous number of moving parts. That has been eliminated along with the torque converter and bevel gear. The Cat D11 XE has 60% fewer moving parts and 85% common parts with the D11.

This machine is a field follow, so Thompson manages a good portion of the maintenance. **"We have performed a lot of the updates,"** Bowen said. **"The Red Hills maintenance crew does the PMs, and they replace wear items like cutting edges. Lately, it's been a few software updates and the Cat engineers are usually on site for that, but we have been through a couple of undercarriages already."** The undercarriages are the same for all four dozers.

Jeff O'Neal, a mechanic with Thompson, takes fluid samples from the D11 XE every 250 hours. **"Mechanically, it seems to be holding up good,"** he said. **"Working on this machine is a lot easier. I can have the generator out of this dozer in probably 2.5-3 hours. The torque converter on a regular D11 requires five or six hours. You have to pull the transmission, and move cylinders and lines to be able to drop the H link down on a ripper. On the D11 XE, you can get under**

the dozer and drop the generator out, pull the finals and the motors out, and you don't have to fool with anything on the back of the tractor."

The recondition interval for the final drives, transmission, torque converter and engine on the mechanical powertrain was 15,000 hours. The Red Hills machine is approaching 11,000 hours, and Caterpillar is projecting 18,000 hours for the drive motors and generators.

"One would think that when you are loading that blade on a mechanical drive from idle to a high RPM, the machine would run hotter," Davis said. **"The D11 XE's engine runs at a constant speed, but lower RPM than the Cat D11T's, which equates to less wear and tear on the engine, and more consistent operation."**

OPERATORS ARE HAPPY WITH THE D11 XE

During Coal Age's visit to the Red Hills mine, dozer operator Mark Williamson, stopped the machine for a few minutes and shared his thoughts. He said he likes how the machine handles and the comfortable cab. **"With the XE, I feel like Caterpillar has built the perfect machine,"** he said. **"There is more room in the cab for the operator. It makes working long hours a little nicer."** Williamson is a tall guy, and he said he can stretch out, get comfortable and do his work.

"This machine turns on a dime," he said. **"You are able to turn a lot easier than the older Cat D11s with thumb controls. They can't turn as sharp."**

With a mechanically driven dozer, the operators would drop the clutch to stop the track in the direction they were turning. On the Cat D11 XE, if the operators want to turn left, they slow the left track and increase the speed on the right track. The turn is a much smoother transition, and the dozers can carry more material. It improves operator performance and productivity.

"This dozer is using 50 gallons per shift less than the other dozers," Williamson said. **"That's a significant amount of savings over a year."**

If he had a choice, Williamson said he would rather run the Cat D11 XE. **"This machine has 100 more horsepower in reverse,"** he said. **"You can do more with this dozer in the mud than the Cat D11Ts."** If you don't have the experience, the Dll XE will make up the difference with the extra power and maneuver better in muddy digging conditions.

As far as the controls, Williamson said Caterpillar has swapped sides with a few controls, but it didn't seem to bother him. **"The idle up and down is on the left now, but the joysticks are still in the same place with the blade,"** he said.

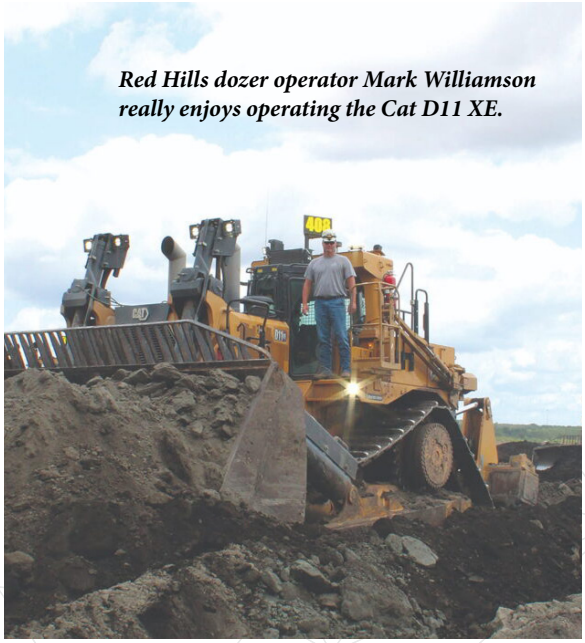
"This machine just operates more precisely," Williamson said **"It reacts instantaneously. With the older dozers, it would take a second to grab when you shifted gears. We would have to time them out to make an adjustment and maneuver."**

"With long pushes, the half gears are extremely nice," Williamson said. **"Whenever we can, we try to use the 1.5 gear for long pushes just for speed purposes."**

"Man, I'm so impressed with this machine," he said. **"It makes a world of difference for me as far as my job during the day."**

After operating a more manual machine, the operators can feel fatigue because they are fighting with the machine as they push the blade through a turn. The Cat D11 XE pushes a fully loaded blade through a turn easily and it's not nearly as strenuous on the operator.

Based on what Coal Age observed at the Red Hills field follow, Caterpillar has made a significant improvement for a machine that was already considered highly productive. Mine management and the operators are happy with its performance. As far as major rebuilds, only time will tell, but logical thinking indicates that the Cat D11 XE will outperform the D11. The product launch is a great way to celebrate the 40th anniversary of the D11.



Red Hills dozer operator Mark Williamson really enjoys operating the Cat D11 XE.

EVENTS

NCTA (NATIONAL COAL TRANSPORTATION ASSOCIATION)

October 21, November 11, 2026
On Track Live
Webinar

ASRS (AMERICAN SOCIETY OF RECLAMATION SCIENCES)

June 6 – 10, 2027
44th Annual Meeting
Pittsburgh, PA

June 7 – 11, 2027
2026 Annual Meeting
Laramie, WY

ACAA (AMERICAN COAL ASH ASSOCIATION)

February 9 – 10, 2027
ACAA 2027 Winter Membership Meeting
Talking Stick Resort Hotel
9800 E Talking Stick Way,
Scottsdale, AZ 85256

May 15 – 18, 2028
World of Coal Ash 2026
Tampa Convention Center
333 S Franklin St.,
Tampa, FL 33602

ACC (AMERICAN COAL COUNCIL)

October 20 – 21, 2026
The Coal Institute Fall Meeting
Mid Pines Inn & Pine Needles Lodge
1010 Midland Rd.,
Southern Pines, NC 28387

November 16 – 19, 2026
Global Carbon Congress
Kuala Lumpur

February 17 – 19, 2027
Miami Coal Forum
The Sunny Hotel
Miami, FL

ALLTRICITY NETWORK

October 21, 2026
2027 Spring Conference
Kiewit's Regional Headquarters
Yellowstone Conference Room
10055 Trainstation Cir.,
Lone Tree, CO 80124

November 5, 2026
2027 Fall Convention
Kiewit's Regional Headquarters
10055 Trainstation Cir.,
Lone Tree, CO 80124

December 8, 2026
December 2026 Alltricity Network Golf Tournament
Raven Golf Club
3636 E Baseline Rd.,
Phoenix, AZ 85042

March 10 – 12, 2027
2027 Safety Conference
The Salt River Project PERA Training & Conference Center
1 E Continental Dr.,
Tempe, AZ 85281

March 23 – 24, 2027
2027 Transmission Planning, Operations & Maintenance Conference
Platte River Power Authority
2000 E Horsetooth Rd.,
Fort Collins, CO 80525

April 19 – 21, 2027
2027 Alltricity Network Spring Conference
Hyatt Regency Denver Tech Center
7800 East Tufts Avenue,
Denver, CO 80237

June 24, 2027
2027 Transmission, Substation & Power Delivery Large Projects Conference
Kiewit's Regional Headquarters
10055 Trainstation Cir.,
Lone Tree, CO 80124

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