Ensuring A Robust COAL EXPORT MARKET

By Rich Nolan, President and Chief Executive Officer, National Mining Association

Although it is seldom acknowledged in the mainstream press, coal remains both the leading fuel for electricity generation worldwide and a key input in the steelmaking process. The International Energy Agency reports that coal accounts for almost 40 percent of electricity generation globally and projects that its consumption will increase for at least the next five years.

Global consumption patterns continue to shift, however, with Asia now far and away the region with the greatest coal demand and growth prospects. While that opens up significant export opportunities for U.S. mines—which contain the largest recoverable coal reserves on earth—optimally exploiting that opportunity will require expansion and improvements in the nation's shipping and port infrastructure. The potential payoff of such investment is significant, as coal exports' economic contributions extend well beyond the activities at the mine mouth and include employment related to downstream transportation providers, service companies that prepare and load coal for export shipment, and other businesses that are supported by coal export activity. (Please visit NMA's uscoalexports.org for detailed news and information on U.S. coal exports.)


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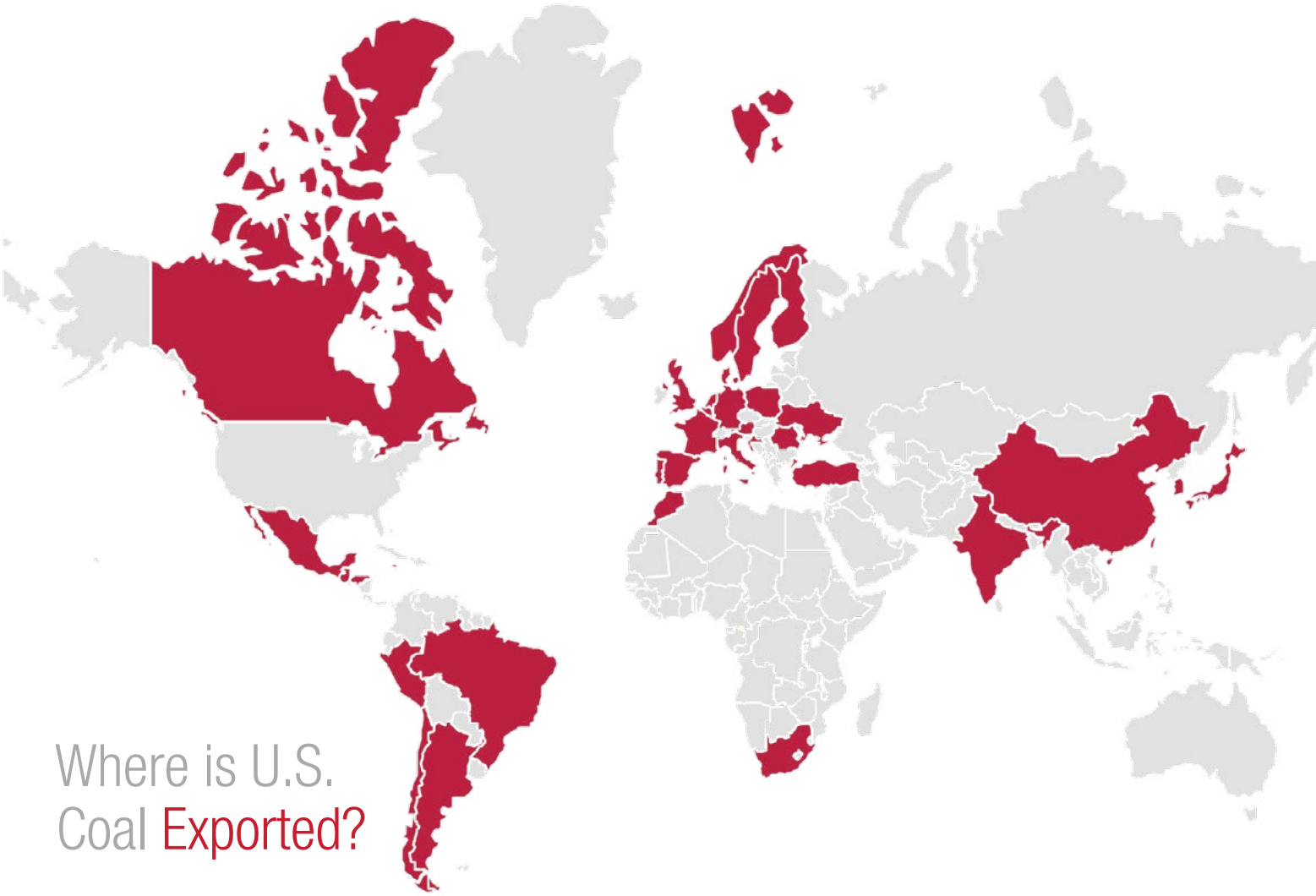


Where is U.S. Coal Exported?

Metallurgical Coal Market

Metallurgical or "met" coal is used to produce coke, which is integral to steelmaking. The steel industry uses coal coke to smelt iron ore into iron to make steel. The high temperatures created by burning coal coke give steel its strength and flexibility. Each ton of steel produced requires approximately 0.6 tons of metallurgical coal.

The U.S. has more than 175 metallurgical coal mines—most in the Central Appalachian region—that directly employ more than 13,000 individuals, and the vast majority of their output is exported. The U.S. consistently ranks as one of the top five global metallurgical coal producers and exporters and competes principally with Canada, Russia, and particularly Australia for a share of the met coal trade market, estimated at 300-325 million metric tons in 2017.

Owing to the relative proximity of East Coast and Gulf ports, U.S. met coal exporters typically enjoy lower ocean shipping rates to Europe compared to Australian exporters, while the latter benefit from lower transportation costs to Asia. While Australian met coal is prized for its quality, U.S. high-volatility met coals generally boast higher fluidity, which can make them more desirable for use in certain metallurgical blends required in Asia, despite the potentially higher shipping costs.

In the short term, U.S met coal producers are likely to continue to suffer from the drop in global steel production resulting from industrial slowdowns due to COVID-19. "Metallurgical coal mines in Appalachia have slowed production based on reduced demand from global steel production and coking coal, and [the U.S. Energy Information Administration] forecasts production in that region will decline by 35% this year," EIA noted in its June forecast.

Over the longer term, global met coal demand is likely to rebound strongly on the backs of infrastructure construction in Asia—including China, India, and Vietnam—to accommodate the region's growing urbanization. The World Steel Association, for one, predicts that global steel demand will increase 50 percent over the next 30 years to meet the needs of the world's growing population.

That sentiment is echoed in the words and actions of several NMA members in recent months. "We expect steel to play an essential role in the revitalization of the global economy as it recovers from the disruption of the COVID-19 pandemic, and in the construction of a new economy supported by mass transit systems, wind turbines, and electric vehicles," Arch Resources CEO and President Paul Lang noted in May. Earlier this year, Warrior Met Coal announced plans to invest approximately $550 to $600 million over the next five years to develop its new Blue Creek longwall mine and barge load-out facility to serve met coal markets in Europe, Asia, and South America.

Thermal Coal Market

Thermal coal is burned to convert water into steam, which drives a turbine to generate electricity. Much of the thermal coal produced in the U.S. is mined in the Powder River Basin (PRB) of Wyoming and Montana, which boasts vast low-sulfur coal deposits.

While most domestically produced thermal coal is consumed in the U.S., a portion is exported (38 million tons in 2019, or 41 percent of total coal exports). In 2019, the U.S. exported 8.1 million tons of thermal coal to India—roughly 75% of whose electric power is now generated from coal-fueled plants—making it the largest U.S. thermal coal export market for the third consecutive year. Among Asian markets, Japan and South Korea are also significant importers of U.S. thermal coal.

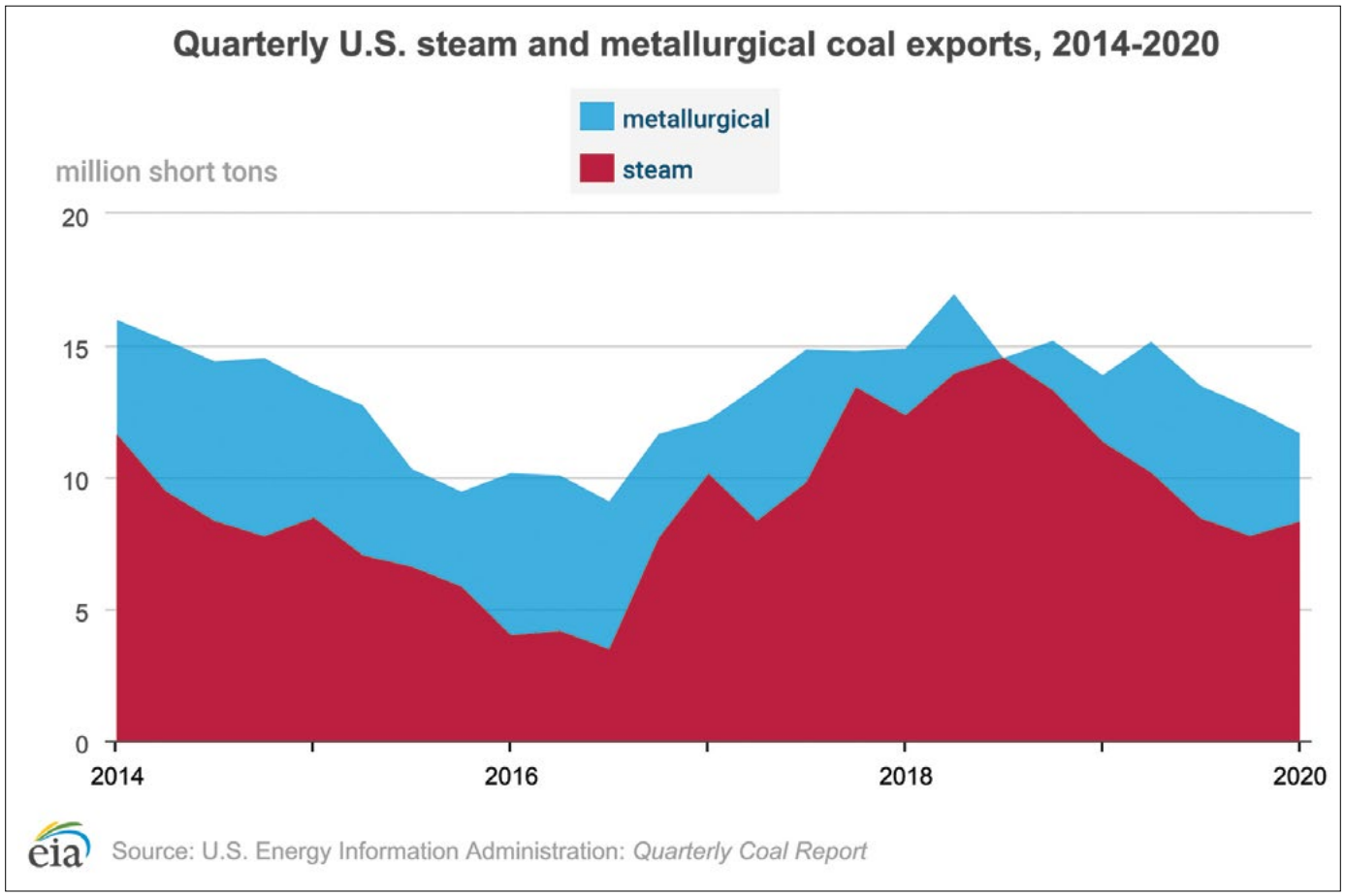
In contrast to its participation in the global met coal market, the U.S. is generally regarded as a "swing" supplier of thermal coal. The U.S. competes with Russia, Colombia, and South Africa to supply European markets, while it competes with Australia, Indonesia, and South Africa to supply Asian markets. At any given time, the volume of U.S. thermal coal exports may fluctuate in response to factors such as market demand, price competitiveness, and currency exchange rates.

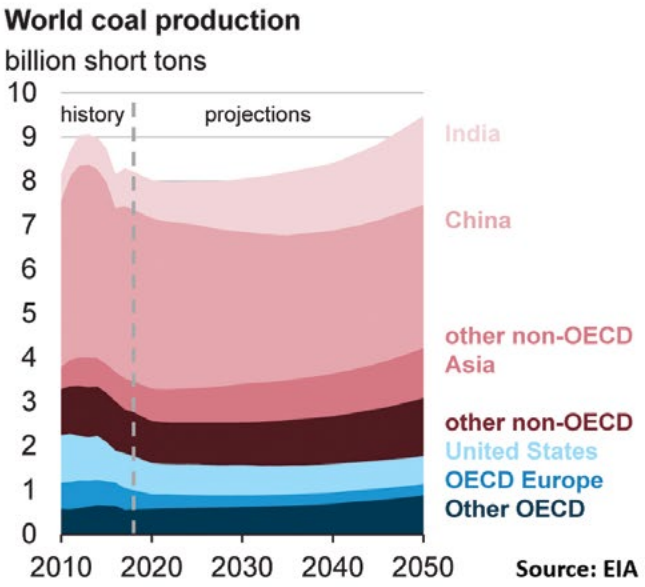
Although the U.S. has traditionally exported more thermal coal to Europe than Asia, that is poised to shift as the EU ramps up efforts to rely more heavily on renewable sources for its electricity production—and as Asian markets build out their coal-fired capacity. Today, Asia accounts for 77 percent of global coal demand. By 2030, IHS Markit projects that its share will rise to 81%.

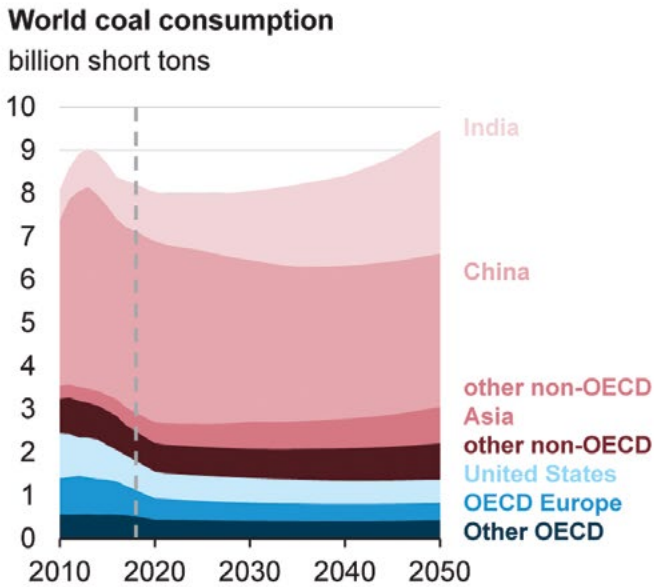
The International Energy Agency (IEA) forecasts that coal power generation will increase by 4.6% per year through 2024, with coal demand in Southeast Asia growing by more than 5% per year over the same period, led by Indonesia and Vietnam. China already has 249.6 gigawatts (GW) of coal-fueled capacity in the planning or construction phases. And while China has substantial domestic coal reserves, Japan—which will build 22 new coal plants over the next five years—will rely heavily on imports. South Asian countries are also building coal-fueled power plants to meet the expected electricity requirements for their growing populations, IEA reports, with Pakistan recently commissioning over 4 GW of coal power plants and a similar capacity under construction. Bangladesh will soon commission the first coal unit of the 10 GW it plans to bring online.

U.S. Waterborne Transport Infrastructure

Clearly, global coal demand remains high—and U.S. reserves of met and thermal coal are more than ample to meet that demand—but only if deliverable at prices that are competitive with other global producers. How well positioned, then, is our nation's waterborne transport infrastructure to serve these export markets?







While rail remains the dominant form of coal transportation in the U.S., 20 percent of the nation's coal is moved on the water. The U.S.' interconnected waterways comprise 12,000 miles of commercially navigable channels that run through 38 states. This system, which is maintained by the U.S. Army Corps of Engineers, is serviced by more than 31,000 barges that move cargo among the nation's rivers, coasts, harbors, and the Great Lakes.

Congress is currently considering regularly enacted legislative updates to water infrastructure, ports, and navigation systems in the United States. The American Water Infrastructure Act and the Water Resources Act of 2020 address allowing more cargo import fees to be used for port maintenance and dredging through the Harbor Maintenance Trust Fund. The legislation also changes the financing for the Inland Waterway Trust Fund for inland waterway transportation so the funding under the Inland Waterway Trust Fund can be used for more maintenance on the system. Both Trust Funds provide exporters the necessary infrastructure for greater flow of goods throughout the systems.

Most coal that is exported from producing regions in the eastern U.S. is transloaded onto oceangoing vessels at terminals located on the east and Gulf coasts, including Baltimore; Hampton Roads, Virginia; New Orleans; and Mobile, Alabama. Combined, these ports exported 78 million tons of coal in 2017, representing 80 percent of the total U.S. coal exported that year.

Western U.S. ports, which by their location are better suited to serve as export conduits for Powder River Basin coal to the growing Asian coal markets, are currently severely constrained by a lack of terminal capacity. As a result, PRB and other western coal exports are typically shipped instead through Canadian ports. While alternatives for western coal exports exist—via Mexico, the Great Lakes, or the Gulf Coast—these routes are longer and thus more expensive for shippers.

Supporting a Robust Coal Export Market

The lack of terminal capacity on the U.S. West Coast is a particularly vexing and urgent problem. Construction of the Millennium Bulk Terminal on the Columbia River, for example, which would facilitate the export of PRB coal to Asian markets, is currently being held up by the state of Washington, which has co-opted the Clean Water Act's 401 certification process to derail construction of the terminal on what appear to be political grounds. NMA supports the Environmental Protection Agency's June 1 rule clarifying the federal licensing and permitting process to allow energy infrastructure projects such as Millennium to be fairly evaluated and efficiently approved.

On the East Coast, a stepped-up program of channel deepening is needed to improve navigational efficiencies and allow for safer passage of oceangoing vessels in and out of harbors. As it stands today, congressionally authorized channel improvement projects are too often delayed for years before receiving appropriations. Congress must appropriate funds for these projects in an expeditious manner to ensure the competitiveness of U.S. exporters not only of coal, but of all other goods and commodities.

On the Gulf Coast, locks and dams on inland waterways require constant upkeep. Lack of regular dredging has significantly restricted movements on these channels, especially during periods of low water. In several key Gulf ports, harbors require deepening to accommodate the larger bulk cargo ships that now transit the expanded Panama Canal.

The U.S. possesses the world's largest recoverable reserves of coal—a resource that is much in demand today for power production and infrastructure building by developed and developing countries alike. To maximize the economic benefits of this resource to our nation's citizens, we need the transportation infrastructure to deliver it efficiently and competitively around the globe.▲

Advancing U.S. Coal Exports

The National Coal Council—a Federal Advisory Committee to the U.S. Secretary of Energy—has published a report assessing and prioritizing market, infrastructure, and policy measures that can be undertaken to increase export opportunities for U.S. coal. Completed in October 2018, *Advancing U.S. Coal Exports: An Assessment of Opportunities to Enhance Exports of U.S. Coal* provides a competitive assessment of U.S. coal export opportunities relative to other supplier nations, as well as an analysis of prospective international markets for U.S. coal, and is recommended reading.

Key among the report's findings are:

- Development and deployment of advanced coal mining and processing technologies to reduce production costs would enhance the competitiveness of U.S. coals in international markets.
- Streamlining of funding for the nation's inland waterway system of locks and dam infrastructure would facilitate the cost-effective flow of U.S. coals to international markets via East and Gulf Coast ports.
- Dredging and channel deepening at East and Gulf Coast ports would allow for the accommodation of larger ships, thereby lowering shipping costs and enhancing the delivered economics of U.S. coals in international markets.
- Improved planning and cooperation between federal and state authorities responsible for environmental review/permitting—as well as reforms to the National Environmental Policy Act and related permitting processes—would enhance development of West Coast export terminals.

- Financing of coal facilities overseas is hampered by domestic and international policy barriers at the Export-Import Bank of the U.S., the Overseas Private Investment Corporation, and Multilateral Development Banks administered by the U.S. Treasury Department.

Rich Nolan is President and Chief Executive Officer of the National Mining Association (NMA)—a national trade association representing coal, metal, and industrial mineral producers; mineral processors; equipment manufacturers; and other suppliers of goods and services to the domestic mining industry. In this position, he directs the association's public policy efforts before Congress, regulatory agencies, and the White House—and sets the association's strategic agenda for media relations, grassroots communications, and political involvement.