Karl Cates, IEEFA Research Editor
Clark Williams-Derry, IEEFA Energy Finance Analyst
Seth Feaster, IEEFA Data Analyst
October 2019

Institute for Energy Economics and Financial Analysis
IEEFA.org

In Powder River Basin Debut, NTEC Stumbles

One Mine Closes as Company Runs Immediately Afoul of Regulators; Navajo Officials Move Wisely to Distance Tribe From Venture; Business Case for Acquisitions Deteriorates

Introduction

An abrupt standoff between Montana regulators and the tribally owned company that is buying three coal mines out of bankruptcy in Montana and Wyoming adds to the already long odds against the success of Navajo Transitional Energy Company's (NTEC) expansion into the Powder River Basin.

One day after NTEC was announcing this week that it had completed its acquisition of Cloud Peak Energy assets in the Powder River Basin (PRB), the Montana Department of Environmental Quality threw a wrench into the deal by raising questions about tribal-sovereignty issues. NTEC closed Spring Creek Mine on Thursday (Oct. 24), sending workers home and dealing NTEC a setback. Also at issue broadly in NTEC's PRB acquisition is who will be held ultimately accountable for hundreds of millions of dollars in mine-cleanup costs.

If it is to resolve the latter problem, NTEC will very likely need Navajo Nation government backing, an unlikely possibility considering how the company all but ignored tribal leadership in the run-up to the acquisition, operating without government consultation and in direct conflict with Navajo energy-investment policy.

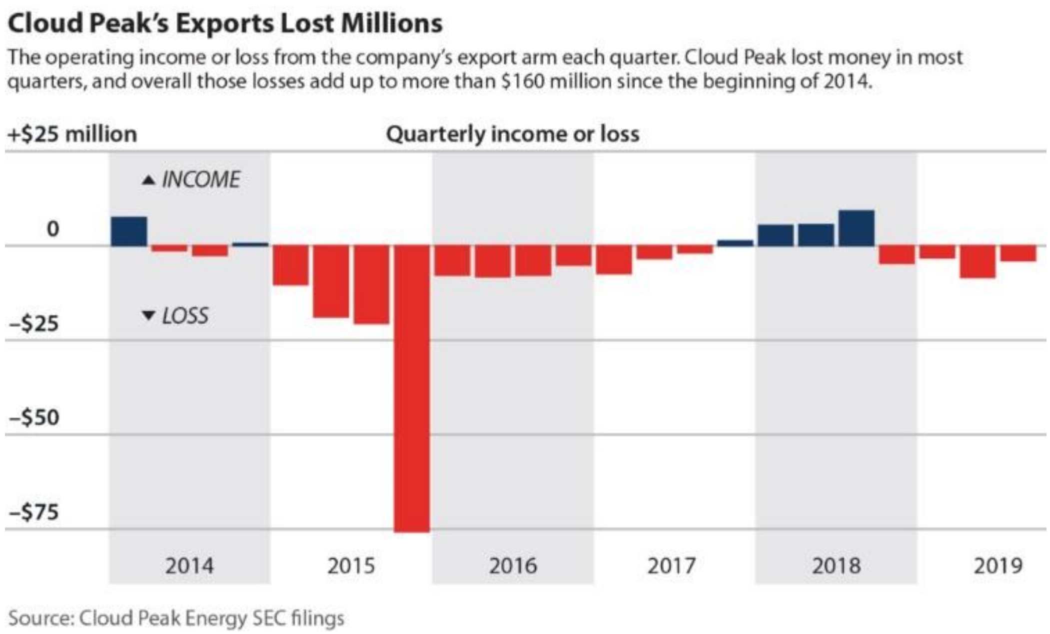
While NTEC has simultaneously touted its ownership by Navajo Nation as a liability buffer rooted in tribal sovereignty, Montana regulators are rejecting that construct, as well they should.

The Navajo Nation government this week moved wisely to distance itself from NTEC. Elected officials and government lawyers are seeking specifically to shield Navajo Nation finances from the liabilities in question, a strategy clearly in the Nation's best interest.

NTEC surprised the Navajo government, the sole shareholder in the company, by announcing its intent to commit $200 million this past summer to buy the three PRB mines. The acquisition was approved by bankruptcy court, but serious questions remained unanswered regarding responsibility for some $407 million in reclamation and performance bonding requirements at the mines.

Local press reports this week detail an emerging Navajo government strategy aimed at protecting Navajo Nation on this front by isolating NTEC in a way that will require the company to stand or fall on its own—specifically without tribal indemnification on bonding obligations. The strategy is materializing through legislation before the Navajo Nation Council and in government officials' concerns on signals from NTEC that its executives intend to use Navajo bonding authorizations created for other purposes years ago to backstop its future cleanup obligations in Montana and Wyoming.

Navajo government officials correctly consider NTEC's stance an overreach that violates the spirit in which the company was founded in 2013. **Meanwhile, the business case for NTEC's acquisition of the mines continues to deteriorate with the ongoing decline of the U.S. coal industry as utility companies transition to other resources to generate electricity.**



While NTEC has promoted the deal as a shrewd move in a down market, competition in the Powder River Basin has grown increasingly cutthroat and will remain so. The odds favor larger players like Peabody Energy and Arch Coal, which are consolidating their operations in the region in order to gain a competitive edge. NTEC's contention that exports would be a big component of the deal's future success is highly questionable, too, as suggested by the chart above.

Because of the core weaknesses in NTEC's business model, because of the way company executives have comported themselves with tribal leaders and others, and because of unresolved mine-cleanup liabilities, the Navajo Nation would do well to follow through on its plans to distance itself as much as possible from NTEC.

Table of Contents

Imminent Risk to Navajo Nation

The Liability-Exposure Issue

Even before the Montana regulators intervened, NTEC's acquisition of Cloud Peak assets was a questionable proposition (see Background/Financial section below and IEEFA's September report, "Proposed Navajo Acquisition of Bankrupt U.S. Coal Company Is an Ill-Timed Gamble."[1] Further, the deal raises concerns that Navajo Nation is being exposed to hundreds of millions of dollars in potential future liabilities through NTEC's use of reclamation and performance bonding provisions dating from 2013 when the company was created.

As part of the Cloud Peak acquisition process, NTEC is in talks with surety companies to underwrite about $407 million in reclamation and performance bond obligations at the mines in Montana and Wyoming. Those surety companies are subsidiaries of sophisticated financial giants with a very specific business model: if a coal company can't pay for cleanup, the surety company uses every legal tool at its disposal to find someone else to foot the bill. Sureties never want to take losses on their deals, and always look for another deep pocket to pay for cleanup.

The surety industry is run largely by players like Zurich American Surety Company, which provided the founding surety bonding for NTEC when it was started six years ago specifically to buy the Navajo Mine in New Mexico from BHP Billiton (Arch Surety Company was a player at the outset as well, and other surety companies tied to the creation of NTEC include Argonaut Insurance Company, CNA Surety, Liberty Mutual Insurance Company, ACE/USA Ace Surety, Chubb Group, Hanover Insurance Company, One Beacon Surety Group, and Travelers Casualty and Surety of America). That purchase was meant to keep the mine running as the supply source to the aging Four Corners Power Plant. Both the plant and the mine employ scores of Navajo workers. NTEC, knowing full well that the mine and the plant will close in the not-too-distant future, is casting the Cloud Peak acquisition as a diversification effort—although in truth it merely amplifies the company's overexposure to one industry while ignoring the possibility of investing wisely in other energy sectors.

Surety companies can and will come after NTEC for cleanup obligations in the Powder River Basin. The question will be whether NTEC will be a going concern when the time comes, able to meet its responsibilities, or whether Navajo Nation will be on the hook by way of its original bonding authorization tied to the creation of NTEC.

NTEC appears to be making a bid to keep the original bonding in place to support its Powder River Basin adventure, a strategy—that if successful—could leave Navajo Nation at the mercy of the surety industry as the company pursues a "blank check" tribal-indemnification policy (see below, NTEC Miscalculations: Arrogance and Apparent Indifference) that would make Navajo Nation the backstop of last resort.

[1] IEEFA. Proposed Navajo Acquisition of Bankrupt U.S. Coal Company Is an Ill-Timed Gamble. August 2019

The strategy is reminiscent of a campaign NTEC ran last year with Peabody Energy in which the two companies tried to get Navajo Nation to buy the Navajo Generating Station and its fuel source, the Kayenta Mine. That deal would've left the Nation with an aging plant and companion mine—and with hundreds of millions in reclamation liabilities that came with the complex. The owners of NGS are closing the plant this December, citing its failing economic viability; Peabody Energy ceased production at Kayenta in August and is responsible for reclamation. A similar if less orderly outcome in Montana and Wyoming is not inconceivable.

Crucial Navajo Government Corrective Action

Tribal legislators have introduced a Navajo Council bill that would limit NTEC's ability to use the Navajo Nation as a backstop for the company's bonding-liability needs. It would also constrain NTEC's ability to claim sovereign immunity,[2] a tactic the company has used to advance its agenda at the potential expense of Navajo Nation.

Legislation No. 0302-19[3] aims "to restate that the limited waiver of sovereign immunity and the general indemnity agreements and sureties in Resolution CAP 13-15 (the NTEC founding resolution) apply only to the NTEC transactions, specifically identified in CAP-13-15 and CD-60-13 (the law that formally created NTEC), involving the purchase of the Navajo Mine and do not extend to any subsequent purchase or transactions of NTEC."

Adoption of 0302-19 would help protect Navajo Nation from NTEC, and could also prevent the company from making any additional ill-advised investments in the rapidly declining coal industry. Without explicit Navajo Nation backing of the kind put forth when it was created, NTEC very likely lacks the financial wherewithal to undertake high-risk deals like the Cloud Peak acquisition.

Background/Financials

NTEC is seeking to purchase three Powder River Basin coal mines—in Montana and Wyoming—from bankrupt Cloud Peak Energy. With the purchase, NTEC would enter the top tier of U.S. coal producers, ranking third by production volume. It would also be taking on risks that will likely prove unmanageable and that could bankrupt NTEC itself while exposing Navajo Nation to significant financial losses.

To acquire the mines, NTEC is spending $15.7 million in cash, signing onto a $40 million promissory note, paying $20 million in overdue accounts payable and $94 million in back taxes and royalties. The costs are part of a deal that comes also with ongoing royalty payments to Cloud Peak that would amount to $7.5 million a year under current production rates and with take-or-pay rail contracts as well. Most important, particularly for the Navajo Nation, the deal raises serious questions as to

[2] Navajo Times. Council attempts to revoke NTEC's waiver of sovereign immunity, October 23, 2019.
[3] Navajo Council. Legislation No. 0302-19. October 2019.

who will be responsible for $407 million in reclamation and performance-bond obligations.[4]

NTEC has described the purchase as a "prudent" investment, but Cloud Peak's finances tell a different story. NTEC executives have dismissed Cloud Peak's problems and subsequent bankruptcy as being due solely to its high debt levels. But the company's troubles are much broader than that: Each of its mines faces operational and market issues that will challenge any new owner. The company's problems are also inextricably tied to the rapid changes that have swept across the U.S. electric generation landscape in the past five years and will continue to reshape that sector in the decade to come. (See IEEFA's report earlier this year detailing the shrinking customer base for the PRB coal,[5] and the likelihood that regional production will continue to decline.)[6]

In short, NTEC is taking on ill-advised risk by buying Powder River Basin mines rather than investing in profitable sectors of the energy economy.

Cloud Peak's Mines Face Significant Operational Difficulties and Market Challenges

The three Cloud Peak mines are: Spring Creek in Montana, and Cordero Rojo and Antelope in Wyoming. Each produces coal with unique characteristics. Spring Creek coal is the most energy-dense of the three, at 9,350 BTU/lb, compared with 8,800 BTU/lb at Antelope and 8,400 BTU/lb at Cordero Rojo.

Even with its relatively high energy content coal, Spring Creek—the mine closed this week by Montana regulators after NTEC failed to persuade the state the liabilities had been addressed—faces significant challenges in the domestic thermal coal market. The ash from Spring Creek coal is high in sodium, which can foul power plant boilers, so only a handful of U.S. plants are equipped to burn the mine's coal. The mine has delivered coal to only three plants so far in 2019, all of which are aging and approaching retirement.[7] Transalta's Centralia power plant in Washington state has been the largest buyer of Spring Creek coal in recent years,[8] but one of the plant's two boilers is slated for closure next year, and the second will be shuttered by 2025. A second plant, Clay Boswell in Minnesota, retired two of its smaller units at the end of 2018. Cloud Peak told investors earlier this year to expect declining domestic sales from the mine through 2023.[9]

Cordero Rojo faces even greater challenges than Spring Creek. The lower-energy coal produced at Cordero Rojo sells at a significant discount to higher-quality coals from the Powder River Basin because of limited electric power sector demand. At

---

[4] IEEFA. Proposed Navajo Acquisition of Bankrupt U.S. Coal Company Is an Ill-Timed Gamble. August 2019.
[5] IEEFA. Powder River Basin Coal Industry Is in Long-Term Decline. March 2019.
[6] IEEFA. Powder River Basin mines may reopen, but the bad news is far from over. August 2019.
[7] Sightline Institute. Coal Exports: After the Crash, Now What? June 2017.
[8] EIA. Coal Data Browser. Accessed October 21, 2019.
[9] SEC. Cloud Peak Form 10-Q. March 2019.

the same time, costs at the mine are rising, because strip ratios, the amount of overburden covering the coal that must be removed, are rising.

Cloud Peak also has acknowledged these concerns, writing in its most recent annual report that "cash margins and cash flow projections for 2019 sales at Cordero Rojo are uneconomic."[10]

Further Cloud Peak's management noted that Cordero Rojo's challenges are permanent and irreversible, leading it to write down the value of the mine by $372.4 million at the end of 2018.[11] In laymen's terms, the write down meant that as of the end of 2018 Cloud Peak considered Cordero Rojo coal to be worthless.[12]

Antelope Mine is the most profitable of the three mines, but it is hardly problem-free. Heavy rains in 2018 created difficult mining conditions and contributed to the collapse of a pile of mining spoil that took many months and many millions of dollars to correct. Those operational challenges added to Cloud Peak's financial woes, and likely accelerated the company's bankruptcy.

Although the spoil-pile collapse has been corrected, the episode underscores the high weather-risk nature of the PRB mining business. Heavy rains and flooding occurred again in 2019, interrupting mining operations and disrupting rail shipments; warm winters or cool summers can dampen consumer demand for power. A bet on a Powder River Basin coal operation is now, in essence, a bet on favorable weather.

Importantly, none of these operational challenges will change regardless of the mines' owner.

Cloud Peak's Export Business Has Produced Heavy Losses, and Export Prospects Remain Dim

Cloud Peak has been the main PRB coal producer in recent years to ship significant volumes of coal to Asian markets, continuing its export shipments long after major rivals, including Peabody Energy and Arch Coal, abandoned efforts to sell PRB coal to Asian customers.

Cloud Peak's export edge over competitors lay in the Spring Creek mine, which has two advantages. First, Spring Creek coal's relatively high energy content sells at a premium in Asian markets. Second, Spring Creek's location at the northern end of the PRB means a shorter rail trip to West Coast ports, shaving several dollars per ton from transportation costs. These advantages gave Cloud Peak's export arm an edge over the company's larger, better capitalized rivals, prompting the company to lock in long-term export contracts with rail and port companies. It was a bad bet.

---

[10] SEC. Cloud Peak Form 10-K. 2018.
[11] Ibid.
[12] Cloud Peak's two coal mine development projects—the Youngs Creek and Big Metal mines—have also been fully impaired due to dismal market prospects.

From 2014 through its most recent quarterly filing, the company has reported losses of $162 million on its export business.

The problem is relatively straightforward—the PRB is simply too far away from Asian markets (and there are too many better-situated competitors) for U.S. exporters to profit consistently. Even the company acknowledged in 2017 that overseas competitors would always have a leg up on Cloud Peak in Asian markets "because of just the distance we are from the coast."[13]

Cloud Peak could overcome this built-in disadvantage during periods of high prices, but during periods of low prices the company was forced to ship coal at a loss in order to comply with the contracts it had signed with rail companies' ports.

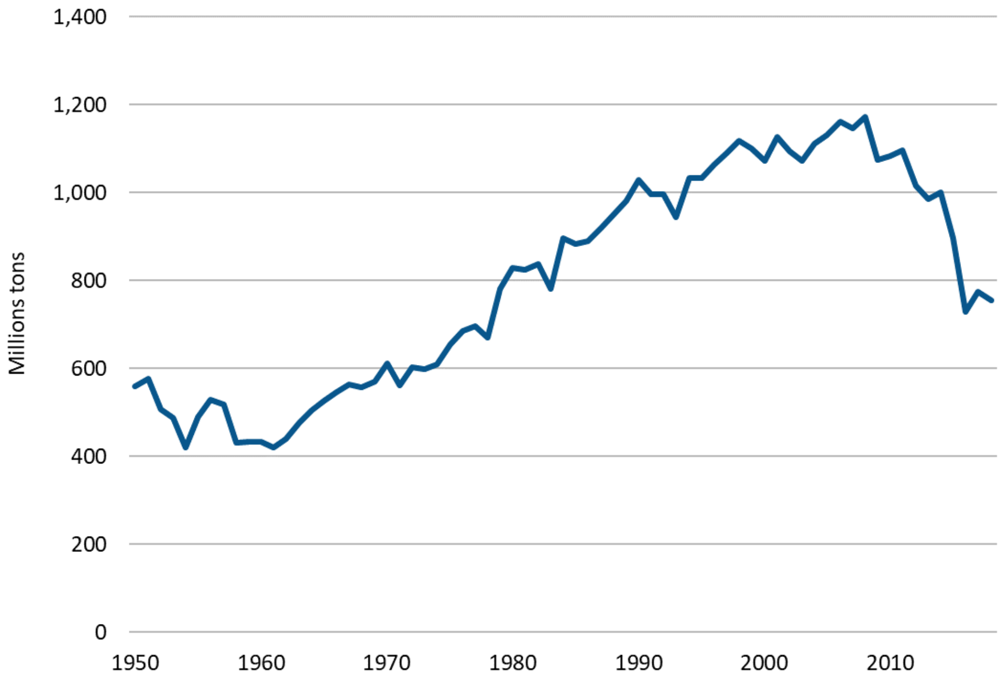
NTEC has touted the potential for robust export profits as a key financial benefit of its Cloud Peak purchase. A new owner, however, is not going to change the geographic and market realities that made Cloud Peak's exports a money-losing proposition. Worse, if NTEC assumes Cloud Peak export contracts without any modifications, NTEC's losses may be even greater than Cloud Peak's. Asian coal prices have declined by one-third since the beginning of 2019, forcing even low-cost Indonesian exporters into financial distress.[14] During a brief period of high international prices, Cloud Peak committed to nearly doubling its export volumes in 2021 and 2022.[15] Unless Asian coal prices stage a dramatic rebound, NTEC could lose millions of dollars from a combination of low prices and contractual penalties resulting from its bet on exports.

The U.S. Coal Market Is in Irreversible Structural Decline

The U.S. coal industry is in freefall. In 2008, it produced 1.17 billion tons of coal. A decade later, that number had dropped to 756 million tons, a decline of more than 35 percent.

[13] Seeking Alpha. Cloud Peak Energy's (CLD) CEO Colin Marshall on Q4 2016 Results - Earnings Call Transcript. February 2017.
[14] Bloomberg News. Collapse in Coal Prices Spurs Distress for Indonesian Miners. October 2019.
[15] SEC. Cloud Peak Form 8-K. May 2019.

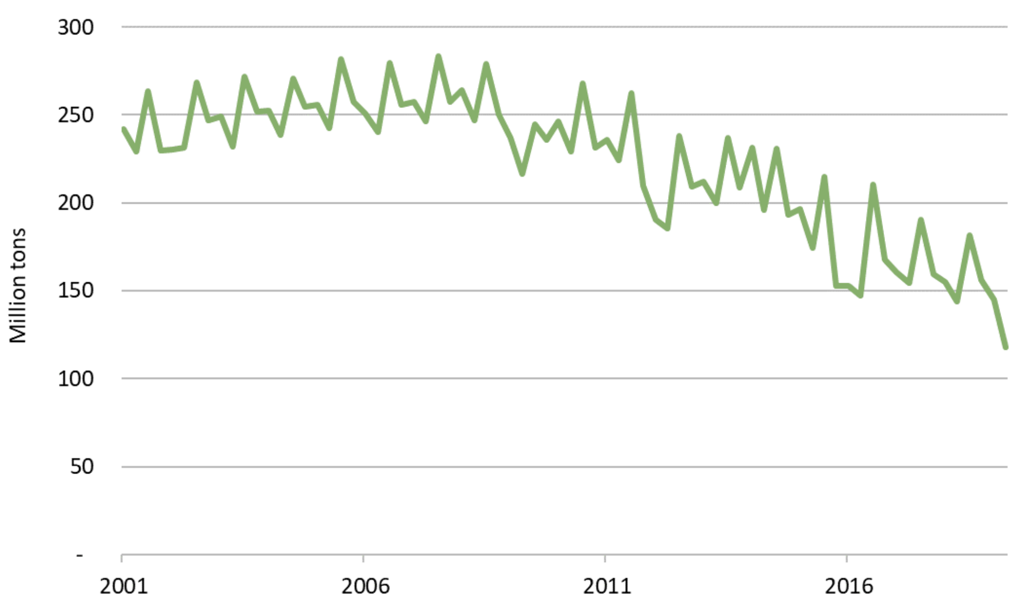
Figure 1: Total U.S. Coal Production



Source: U.S. Energy Information Administration.

Consumption of coal by the domestic electric power sector—the chief consumer of Cloud Peak's coal—has fallen even more dramatically, with coal consumption in the second quarter of 2019 having dropped 58 percent from its peak, in 2007.

Figure 2: Quarterly Coal Consumption, U.S. Electric Power Sector



Source: U.S. Energy Information Administration.

The domestic coal market's decline stems principally from technology shifts. Wind, solar and natural gas have become cheaper than coal. Many utilities have shut down coal plants, many more closures are slated, and retirement announcements continue Earlier this month, for example, the utility company PacifiCorp announced extensive early retirements for portions of its Western coal generation fleet, coupled with major investments in renewable power.[16] Meanwhile, coal power plants that remain are often run at lower rates, further depressing domestic demand for thermal coal, as detailed in a recent IEEFA report that shows how the Southeast, a longtime coal-power bastion, is rapidly turning to other forms of power generation.[17]

Despite NTEC's predictions of a near-term rebound in coal demand, the industry faces severe structural challenges in the coming years. The falling cost and rising deployment of wind and solar will continue to undercut demand for coal.[18] Only a sustained rise in natural gas prices might slow these trends—yet higher gas prices would likely spur further investments in the U.S. gas-fracking sector, moderating gas price increases and limiting the potential upside for U.S. coal demand.

Powder River Basin Coal Producers Face Troubled Markets and Increasingly Fierce Competition

For years, many coal industry analysts asserted that the Powder River Basin coal industry was shielded from the broader coal market downturn due to its high-volume and low-cost production, as well its low-sulfur coal (which helps utilities comply with clean air regulations). Yet today the PRB coal sector faces stiffer headwinds than much of the rest of the U.S. coal sector. The U.S. Energy Information Administration reports that coal production in Wyoming has fallen by 9.5 percent year to date, compared with a 1.5 percent decline in Appalachian production over the same time period.

An IEEFA report published in March[19] concluded that the PRB is in such a steep spiral that it cannot recover, owing to flat demand for electricity and market forces that favor gas and renewables.

A Moody's Investors Service analysis published this week concludes that the basin's "long-term prospects" are weak, specifically citing "the shift toward renewable energy and social opposition to exports in the Pacific Northwest." The Moody's report also cites EIA short-term forecasts—which have a history of accuracy (as opposed to the agency's longer-term outlooks)—that show production in the Western Region of the U.S., which encompasses the PRB, falling from 418 million tons in 2018 to 364 million tons in 2019 and 339 million tons in 2020.

Even as the PRB faces unprecedented demand-side challenges, competition in the basin has never been fiercer. Cloud Peak's two largest rivals, Peabody Energy and Arch Coal, have announced a Western U.S. joint venture aimed at cutting costs and

---

[16] IEEFA. PacifiCorp's transition to renewables and battery storage sets a new industry pace. October 2019.
[17] IEEFA. Coal-Fired Power Generation in Freefall Across Southeast U.S., October 2019.
[18] Lazard. Levelized Cost of Energy Analysis, Version 12.0. 2018.
[19] IEEFA. Powder River Basin Coal Industry Is in Long-Term Decline. March 2019.

undercutting rivals. Together, Peabody and Arch have produced more than 60 percent of all PRB coal over the past five years; by joining forces, they are poised to dominate the PRB coal industry.

"We expect that at least a few PRB mines will close in the early 2020s," Moody's analysts wrote in their report, mentioning NTEC by name and calling its acquisition of Cloud Peak a "wild card" that will feed an excess of PRB coal that ultimately "will exert pressure on cash margins" by all producers.

Also this week, analysts at Fitch Solution published a report forecasting a 27.9 percent reduction in U.S. coal production by 2028[20] despite efforts by the Trump administration to revive coal consumption. That outlook is rosier than some but dire nonetheless.

"While on the surface these may seem promising for the coal industry, we do not see these shifts as enough to turn around the U.S. thermal coal consumption decline as domestic coal-fired plants continue to retire," Fitch Solutions analysts wrote. "Companies in coal-friendly states may see [the Trump administration's Affordable Clean Energy rule] as an opportunity to reduce costs for coal-fired plants by loosening emission standards; however, we maintain our view that this will not thwart the overall industry decline."

IEEFA, which questioned the rationale for the deal at the outset, sees the business case for the acquisition as having further eroded in recent weeks. Industry-analyst consensus, the persistence in trends around renewables and gas, and an ongoing wave coal-fired plant retirements support this conclusion.

NTEC's Miscalculations

Questionable Projections; Suspect Assertions

The arguments NTEC has made in favor of the Cloud Peak acquisition have clearly been colored by the career paths of the company's executive team, which have been largely focused in the coal production sector. NTEC's CEO was deeply involved for years, for example, in unsuccessful initiatives to build West Coat coal-export terminals, a long-running effort that in the end proved fruitless. Those campaigns were defeated in part by market forces and in part by public opposition, which has become a coal-industry risk factor in and of itself.

The company seems transitional in name only, and has been dismissive of broad trends toward the uptake of renewable energy. In a late-October public presentation,[21] the company discounted the possibility of developing utility-scale solar power on tribal lands, for instance, although traction has grown recently

---

[20] S&P Global Market Intelligence. Fitch Solutions projects 27.9% drop in US coal production by 2028. October 2019.
[21] NTEC presentation. NTEC Acquisition of Cloud Peak Energy. October 2019.

around tribal solar initiatives in the region, as noted in an IEEFA report published this week.[22]

In addition, company officials have said Germany is a viable future export market for Cloud Peak coal, although Germany is in the vanguard of electricity-generation transition and is phasing out its coal-fired power industry. It has said Japan is a good long-term market as well, although Japan is also seeking to move on from coal.[23]

NTEC executives have also put forth specific production projections that do not hold water, stating, for example that Powder River Basin coal production will level off at 250 million tons annually through 2035, an assertion that defies long-term trends. Similarly, the company has said coal-plant retirements are slowing. None of these assertions pass muster.[24]

Arrogance and Apparent Indifference

In the process of acquiring the mines in Montana and Wyoming, NTEC executives seem to have gone out of their way to alienate the Navajo community. The top three executives, who are non-Navajo, did not inform the Navajo government—the sole shareholder—that the deal was in the works until after it had been announced. NTEC also began working on the acquisition at about the same time the president of Navajo Nation issued a proclamation saying the Nation was prioritizing renewable energy development.

When Navajo government officials summoned NTEC executives, who are based in Farmington, N.M., to tribal headquarters in Window Rock, Ariz., to explain their rationale for the acquisition, the executives dispatched others in their place.

As controversy built over NTEC's activity, the company revised boilerplate language in its press releases to emphasize its supposed independence. NTEC press releases as recently as early September described the company as "100 percent owned by the Navajo Nation." That language was altered this month to read, "100 percent owned, but not controlled, by the Navajo Nation."

Collectively, these actions are seen for the slights they are and will very likely have consequences—most immediately around whether NTEC can reopen the Spring Creek Mine and how it will do so without Navajo Nation support.

In a telling comment to the Gallup Independent[25] this week on NTEC's acquisition of Cloud Peak assets, Navajo Nation President Jonathan Nez said, "I didn't know about it until everyone else knew about it… that's kind of embarrassing to say as the leader of the Navajo Nation. But it's true.

"I guess now the Navajo Nation owns land up in Montana and Wyoming."

---

[22] IEEFA. Tribal Utility-Scale Solar Initiatives Advance Across Southwest U.S. October 2019.
[23] IEEFA. Japanese Thermal Coal Consumption Approaching Long Term Decline. July 2019.
[24] IEEFA: High-risk Navajo acquisition of Montana-Wyoming mines isn't a done deal. October 2019.
[25] Gallup Independent. Nez: Council 'not going to be happy.' October 22, 2019.

The Independent this week published a separate article, "NTEC believes Nation gave 'blank check' for $1B in bonds,"[26] in which Navajo Nation legal and financial staff members assert that NTEC "is using a back door for the Nation's approval of about $1 billion in bonding" from the creation of NTEC in 2013. The article details how Navajo Nation Justice Department officials expect NTEC to try to apply tribal resolutions dating from 2013 and 2015 to its acquisition of the Cloud Peak mines.

"They believe they already have the Nation's consent that was given back in 2013 and 2015," a tribal attorney told the Independent. "DOJ (Department of Justice) strongly disagrees."

These accounts, taken together, suggest an arrogance on the part of NTEC executives that has almost certainly been a factor in triggering legislative and legal blowback within Navajo government and that has effectively and needlessly isolated the company from the community it is supposed to benefit.

NTEC also bungled relations with Montana regulators. The state warned the company twice—and well in advance—that liability issues would be a stumbling block in the acquisition of Spring Creek Mine, warnings that NTEC executives chose to ignore.

Conclusions/Recommendations

NTEC is on thin ice. Successful operation of its new Powder River Basin mines hinges on resolution of cleanup-liability issues, a problem that may prove intractable.

Meanwhile, the business case for the acquisition continues to deteriorate.

Navajo Nation is moving wisely to protect itself from the company by considering legislation to insulate the Nation from NTEC by limiting tribal indemnities that could require the Navajo Nation to pay hundreds of millions of dollars to clean up NTEC mines. Such legislation would help manage the Nation's exposure to NTEC's high-risk behavior and shield it from financial contagion that could result from further declines in the U.S. coal market.

[26] Gallup Independent, NTEC believes Nation gave 'blank check' for $1B in bonds. October 23, 2019.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

About the Authors

Karl Cates

Research Editor Karl Cates has been an editor for Bloomberg LP and the New York Times and a consultant to the Treasury Department- sanctioned community development financial institution (CDFI) industry. He lives in Santa Fe, N.M.

Clark Williams-Derry

Energy Finance Analyst Clark Williams-Derry has been director of energy finance and research director for the Sightline Institute, a multi-issue sustainability think-tank based in Seattle, where his research focused on U.S. and global energy markets. He was also a senior analyst for Environmental Working Group.

Seth Feaster

Data Analyst Seth Feaster has 25 years of experience creating visual presentations of complex data at The New York Times and more recently at the Federal Reserve Bank of New York. He specializes in working with financial and energy data.