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Daily Environment Report

Afternoon Briefing - Your Preview of Today's News

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Dow Pesticide Decision Came 'Down to the Wire,' Emails Show

Posted August 18, 2017, 02:22 P.M. ET

By [Tiffany Stecker](#)

EPA Administrator Scott Pruitt made the decision to keep a neurotoxic pesticide on the market in a relatively short timeframe, internal agency emails show.

Pruitt had not been briefed by agency staff on chlorpyrifos as of nine days before a draft order to keep the pesticide legal began to circulate, according to the emails. Pruitt's March 29 order denied a 10-year-old petition from environmental groups to end the use of chlorpyrifos, a widely used insecticide linked to cognitive delays in children.

The emails also show the EPA decided to keep the pesticide legal weeks before Pruitt officially signed the order to do so.

Denying the longtime petition on the pesticide triggered an outcry from environmental groups and support from agricultural interests.

The Environmental Protection Agency made public more than 700 pages of heavily redacted correspondence Aug. 17 under the Freedom of Information Act in the agency's first response to a flood of requests from nonprofit organizations and media outlets. They were seeking details on the denied chlorpyrifos ban, a move that contradicted the EPA's recommendations under President Barack Obama. The agency is expected to release more documents to comply with the FOIA requests.

"Providing regulatory certainty to the thousands of farmers that rely on chlorpyrifos, while still protecting human health and the environment is critical," Amy Graham, EPA spokesperson, told Bloomberg BNA in an email. "We continue to examine the science surrounding chlorpyrifos while taking into account USDA's scientific concerns with the methodology used by the previous Administration."

'We Are Down to The Wire'

In early March, EPA staff began expressing concerns that the agency wouldn't meet a looming court deadline to act on the 2007 petition from the Natural Resources Defense Council and the Pesticide Action Network to revoke the legal tolerances of the pesticide on food.

"I am very concerned that we are down to the wire," Sarah Rees, director of the EPA's Office of Regulatory Policy and Management told Office of Policy associate administrator Samantha Dravis in a March 1 [email](#).

Dravis, then a recent hire to Pruitt's coterie of advisers, asked for a briefing the following day.

It was still unclear by March 7 whether the EPA would meet the March 31 legal deadline for the decision. The agency's lawyers [were ready](#) to ask the U.S. Court of Appeals for the Ninth Circuit to extend the cutoff date to either accept or reject the petition.

But Pruitt had yet to hear from staff about the issue by March 7.

"It hasn't gotten on his calendar as far as I can tell," Wendy Cleland-Hamnett, acting chemicals chief, [told](#) Dravis. Nine days later, Cleland-Hamnett sent a draft denial of the petition.

Turnaround is "Absurdly Short"

Melanie Benesh, a legislative attorney with the Environmental Working Group, called the turnaround for a chlorpyrifos decision "absurdly short" for such an important decision.

"What is clear from these documents is that Administrator Pruitt's abrupt action to vacate the ban on chlorpyrifos was an ideological, not a health-based decision," Benesh told Bloomberg BNA in an email.

Chlorpyrifos was first registered as a pesticide in 1965 and developed by Dow Chemical Co. more than 70 years ago. It is widely used on corn, soybeans, fruits and vegetables, and on golf courses. The pesticide works by suppressing an enzyme that is essential for nerve function. Exposure in humans can lead to headaches, dizziness, and in some cases convulsions and death.

Several long-term population studies have also linked low exposure of chlorpyrifos to neurological delays in children who came in contact with the pesticide, or whose mothers were exposed while pregnant. Dow and the pesticide industry have rejected these studies as scientifically weak. In denying the petition, the EPA will have to decide how to regulate the insecticide by 2022 when the current registration on chlorpyrifos expires.

Dow Agrosiences was not immediately available to comment to Bloomberg BNA on the emails.

EWG and the nonprofit American Oversight sued the EPA in June to compel the release of communications between Pruitt and agricultural interests relating to the order.

"American Oversight will continue to fight in court to combat Scott Pruitt's penchant for secrecy, including on pesticides," the organization's executive director Austin Evers said in a statement to Bloomberg BNA.

Peabody Mine May Survive if Railroad Extension Built

Posted August 18, 2017, 7:03 A.M. ET

By Stephen Lee

A group of business and government representatives are exploring the possibility of keeping alive a troubled coal mine in northern Arizona.

The Kayenta mine, operated by Peabody Energy, appears likely to shut down at the end of 2019, when the nearby Navajo Generating Station is also scheduled to close. The two are linked because the power plant is Kayenta's only customer. No rail line exists to ship the Kayenta coal to the outside world.

But now, a group of stakeholders that includes Peabody, the Bureau of Reclamation, and Rep. Tom O'Halleran (D-Ariz.) have come together to study the cost of building a rail extension to a Burlington Northern Santa Fe line 115 miles to the south.

The group's first step is to identify what a project like this would cost, O'Halleran told Bloomberg BNA. That work is under way now.

"They're kind of isolated," O'Halleran said. "The infrastructure is all geared towards pushing two trains of coal a day to the power plant, and that's not going to be available to them. But is a railroad tie feasible? How much time would it take to build? The delivery system is just not in place right now."

Environmentalists said a rail extension was unrealistic.

"The coal industry is in a permanent decline, and investors have fled and aren't coming back," Bill Corcoran, western campaign director for the Sierra Club's Beyond Coal campaign, told Bloomberg BNA. The Sierra Club has received funding from Bloomberg Philanthropies, the charitable organization founded by Michael Bloomberg, the majority owner of Bloomberg L.P., an affiliate of Bloomberg BNA.

Corcoran also pointed to recent public comments from Hunter Harrison, chief executive of rail giant CSX Transportation, about no longer investing in new infrastructure for coal.

Peabody spokeswoman Beth Sutton declined to comment on the rail spur, but said the company continues working with stakeholders that would allow NGS to stay open "well beyond 2019." That includes "engaging a globally recognized firm to identify a new ownership structure," Sutton said.

Gasification Plans Alive

O'Halleran also said the possibility of building a coal gasification plant to replace the Navajo Generating Station is on the table, corroborating statements made by Navajo Nation presidential spokesman Mihio Manus to Bloomberg BNA earlier this month.

Those comments have taken many industry watchers by surprise, in light of two recent high-profile stumbles in the coal gasification industry. Duke Energy's Edwardsport coal gasification plant in Indiana cost \$1.5 billion more than originally planned and still doesn't run reliably, according to David Schlissel, director of resource planning analysis at the Institute for Energy Economics and Financial Analysis (IEEFA).

More recently, Mississippi regulators concerned about the rising costs of Southern Co.'s Kemper plant ordered the company last month to transition the plant to natural gas.

On Aug. 11, the IEEFA said coal gasified power at Edwardsport costs \$64.40 per megawatt hour, compared to \$44.37 at the Navajo Generating Station.

“The federal government should stop feeding fantasies about gasifying or exporting coal and start investing in a diversified economic transition that has a plausible future,” Corcoran said.

Energy Nominees’ Industry Ties May Pose Conflict: Watchdog Groups

Posted August 18, 2017, 01:10 P.M. ET

By [Rebecca Kern](#)

Financial disclosure forms for two Energy Department undersecretary nominees show income from energy companies, including Southern Co. and TransCanada Corp., raising concerns from government watchdog groups of potential conflicts of interest.

Mark Menezes, nominated to the No. 3 position at the Energy Department, works in energy sector investment at Berkshire Hathaway Energy Co., while Paul Dabbar, nominated as the undersecretary for science, works in energy sector investment at J.P. Morgan. Both have personal investments in large energy companies. Menezes also previously lobbied for energy clients.

[Menezes](#) and [Dabbar](#) have said in agreements to the Office of Government Ethics that upon confirmation they will resign from their current jobs and divest from energy-related investments within 90 days. Both are awaiting a Senate floor vote on their nominations.

Government watchdog groups are concerned nonetheless with the potential for the nominees to be influenced by their past energy industry ties once they are confirmed.

“The financial or personal ties that a lobbyist or investor develops in the course of their previous employment may affect their ability to be impartial when making decisions as a representative of the public in the federal government,” Brendan Fischer, director of federal and Federal Election Commission reform at the Campaign Legal Center, a nonprofit organization focused on election law, told Bloomberg BNA.

Menezes is vice president of federal relations for Berkshire Hathaway Energy Co., and has received income exceeding \$5,000 in the previous two calendar years from Southern Co. and Berkshire Hathaway Energy Co., which includes the businesses of PacifiCorp and MidAmerican Energy Co., according to his public financial disclosure [form](#).

Menezes previously was a partner at the law firm Hunton & Williams LLP, heading its energy practice group, where he was a registered lobbyist for energy companies such as Southern Co., Duke Energy Corp., Xcel Energy Inc., and Entergy Corp., according to the Center for Responsive Politics. He also previously worked as vice president and associate general counsel for American Electric Power Co. Inc., one of the largest electric utilities in the U.S., and participates in its pension plan. He said in his disclosure that he would not participate “personally or substantially” in a matter that has a “direct or predictable effect” on AEP unless he first obtained a written waiver. He also said he would divest from Alphabet Inc. and other entities. Dabbar is the managing director for

mergers and acquisitions at J.P. Morgan, overseeing energy investments, and has received income exceeding \$5,000 in the previous two calendar years from TransCanada and Sempra Energy, along with 19 other large to mid-sized energy companies. He is invested in ConocoPhillips Co. Inc., Chevron Corp. and Phillips 66 Co., according to his public financial disclosure [form](#). He said in his ethics agreement he would divest from these and other companies. Nick Loris, a fellow in environmental and energy policy at the conservative Heritage Foundation, said he's not too concerned about a perception of conflict of interest for the nominees.

"The federal government does robust checks and tries to have as much transparency as possible to ensure those types of activities don't happen whether it's a Democrat or Republican," Loris told Bloomberg BNA.

While the Office of Government Ethics is in charge of signing off on presidential nominees' ethics and financial disclosure forms, each federal agency has a designated ethics official who makes sure a new employee follows through on ethics agreements, an OGE staff member told Bloomberg BNA on background.

Setting Example

"It starts at the top, President Trump himself has an abundant number of conflicts of interest," Paul Seamus Ryan, vice president of policy and litigation at Common Cause, a nonpartisan good-government group, told Bloomberg BNA.

"President Trump ran on the promise of draining the swamp of corruption in Washington, but he instead only filled the swamp...and has brought a bunch of financially conflicted individuals into his administration," Ryan said.

While the president isn't subject to certain conflict of interest statutes, others in his administration must abide by them, he said.

In their ethics forms Menezes and Dabbar said they will exempt themselves from participating "personally or substantially" in any particular matter that would have a direct or predictable effect on their own financial interests, their families or former employers.

One way to avoid legal problems is to sell conflict-producing investment assets, which Menezes and Dabbar said they would do, he said.

The Campaign Legal Center's Fischer said his main concern is when representatives from the energy industry are taking on government posts "it suggests that the regulated are becoming the regulators." A concern is "that there will be an incentive to go on easier on their former friends and colleagues," he said.

The Trump administration has provided a number of waivers to political appointees in office. Walter Schaub, the former director of the Office of Government Ethics, resigned in July due to concerns that the Trump administration's ethics program was too weak.

Sheila Krumholz, executive director of the Center for Responsive Politics, told Bloomberg BNA that she agreed that the oversight and enforcement of conflict of interest waivers isn't as strong as it should be. She said the OGE is a small agency that's responsible for the entire federal government, and that "it's an onerous task to attempt to hold all political appointees accountable."

Southern Seeks Expanded Loan Guarantees for Troubled Plant

Posted August 18, 2017, 8:21 A.M. ET

By [Mark Chediak](#), [Ari Natter](#) and [Jennifer A. Dlouhy](#)

Developers of a troubled nuclear plant in Georgia are seeking more federal support for the project, potentially increasing a record \$8.3 billion loan guarantee it has already been promised, according to the two companies leading the project.

Southern Co. and Oglethorpe Power Corp., which are the lead owners of two new reactors under construction at Plant Vogtle, said they are in talks with the Energy Department to rework the terms of their guarantee, including increasing government financing.

“We have filed an application to potentially increase the amount of funds available for the Vogtle project under our DOE loan guarantee agreement to keep all options open for customers,” Georgia Power spokesman Jacob Hawkins said in an email. Georgia Power, a unit of Southern, is the lead developer of the project with a 46 percent stake.

The growing costs of the project mean the companies could qualify for more federal support, according to people familiar with the discussions. The loan agreements required changes after the bankruptcy of Westinghouse Electric, the lead contractor. The Energy Department has been encouraging the companies to apply, they said. The people asked not to be identified because the talks are ongoing.

“The Department of Energy continues to have daily conversations with our borrowers about the status of Plant Vogtle,” Shaylyn Hynes, a spokeswoman for the Energy Department, said in an email.

The Energy Department has already committed to back \$8.3 billion in loans for the venture, which is the last new nuclear plant under construction in the U.S., after developers stopped work on a separate project in South Carolina. President Donald Trump has proposed killing the loan guarantee program, which provides a government guarantee that loans to the project will be repaid, and Congress may follow suit, and so the additional financing may need to be rushed through to beat any cutoff.

Oglethorpe said in a filing earlier this month that it estimated the cost to complete the reactors had increased from \$5 billion to as much as \$7.3 billion. The company has already withdrawn \$1.7 billion in federal aid out of \$3.1 billion promised.

“We have applied for a potential increase in our DOE loan amount to keep our financing options open while we continue to evaluate the future of Vogtle 3 and 4,” Greg Jones, an Oglethorpe spokesman said in an email.

Southern is set to tell regulators in Georgia by month’s end whether it plans to continue with construction plans for the plant. Regulators in the state signaled their support for the project, which is years delayed and billions dollars over budget, voting Aug. 15 to review a new cost estimate.

Earlier this month Southern said it estimated its portion of the cost to be at least \$11.5 billion. Given Southern’s 46 percent stake in the project, that would put the total cost of building the two reactors at \$25 billion. “We need the administration to engage sooner than later,” Tim Echols, the vice chairman of the Georgia Public Service Commission and a proponent of the project, said in an

email.

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Ban on Toxic Acid May Test Californians' Thirst for Cheap Fuel

Posted August 18, 2017, 9:52 A.M. ET

By [Hailey Waller](#) and [Robert Tuttle](#)

Californians are used to paying more for gasoline, but that may be tested soon if a pair of Los Angeles-area refineries are forced to stop their use of a toxic chemical.

The local air-quality regulator indicated this month that it may ban hydrofluoric acid from both PBF Energy Inc.'s Torrance refinery and one owned by Valero Energy Corp. eight miles away. The chemical, used by 35 percent of all U.S. refineries, boosts octane to make cleaner-burning gasoline. But some residents fear that if it were ever released, it could form a poisonous cloud that would threaten a quarter-million area lives.

Phasing out the acid may cause a surge in pump prices that dwarfs one seen in 2015, when an explosion at the Torrance refinery, then owned by Exxon Mobil Corp., raised California's retail gasoline price by a dollar in three months. Fuel demand on the West Coast is near a 10-year high, government data show. And the price for regular gasoline at California's pumps is already pushing \$3 a gallon, more than 60 cents above the U.S. national average, according to data from AAA, the largest U.S. motoring group.

"There's a more-than-passing chance that it could create a scarcity situation for octane," said Vikas Dwivedi, senior analyst at Macquarie Capital Inc. in Houston. "A big pinch in octane could take prices way up. It would be pretty substantial and everybody would feel it in their wallets."

The 150,000 barrel-a-day Torrance plant is the second-biggest in Southern California, producing a fifth of the area's gasoline. Only California's 19 refineries, plus a handful overseas, are able to produce gasoline that meets the state's strict environmental fuel standards.

The 2015 explosion spurred some of the concern about using the acid, which has been controversial since the 1980s. The U.S. Chemical Safety Board called the incident, which injured four workers and almost halted fuel production for more than a year, a "near miss" after the explosion hurled a piece of machinery toward a tank of the acid.

"There's a real crisis of confidence with the Torrance refinery," state Assemblyman Al Muratsuchi said in a telephone interview, pointing to a series of mishaps including fires, power cuts and heavy flaring that have plagued the refinery since PBF took it over in June 2016. He has proposed legislation to phase out use of the acid in California by the end of the decade.

If limits on the acid create a scarcity in locally made fuel, Southern California would have to buy as much as 25 percent of its gasoline from places as far away as India and the U.K., driving prices higher, Dave Hackett, president of Irvine, California-based Stillwater Associates LLC, said in a report last month that was commissioned and reviewed by PBF. Gasoline imports could rival or surpass 2015 levels, when they rose more than 10-fold to almost 70,000 barrels a day, he said.

"This is not an end-of-the-world scenario," said Sally Hayati, a community resident and president of

the [Torrance Refinery Action Alliance](#), the largest activist organization, who added that a short-term price increase would be a small price to pay. "It's an annoyance, an interruption in production, but it's not a game changer."

Price fears may also be overblown, Patrick Dehaan, a senior analyst at pump-price monitor [Gasbuddy](#), said by telephone. A switch away from hydrofluoric acid "is one of those things that refineries know in advance" and the market can plan for, unlike explosions, he said.

Safety Question

Breathing hydrogen fluoride can damage the lungs causing swelling and fluid accumulation and can cause severe burns to skin, according to the U.S. [Centers for Disease Control and Prevention](#). Breathing in high amounts can be fatal.

A phaseout would cost about \$500 million per refinery, according to an estimate by Gordon Schremp, senior fuels analyst for the California Energy Commission. That's almost equal to the \$538 million PBF agreed to pay for Torrance.

The acid at Torrance has been modified since 1997 with an additive that makes it less likely to spread through the air and making it safe to use, Mike Karlovich, a spokesman at PBF's headquarters in Parsippany, N.J., said by telephone.

The company's assurances haven't convinced the [South Coast Air Quality Management District](#), the local regulator, which said in an [Aug. 2 presentation](#) that a phaseout would be a "preventative measure." It stated that PBF "did not sufficiently demonstrate" that a hydrofluoric acid cloud could be prevented.

PBF expressed disappointment in the stance, and a Valero statement issued after it alleged the regulator was "seeking drastic changes when there have been no HF related safety issues."

Dutch Fire

A late July fire at Royal Dutch Shell Plc's Pernis refinery in the Netherlands which released a hydrofluoric acid cloud heightened fears of a similar event in California, even though Shell said the cloud stayed within the refinery and wasn't in hazardous concentrations.

"The fire and acid release at the Shell refinery in Rotterdam is the latest sign that an accident could create a deadly acid plume," Hayati said, while acknowledging there could be a "temporary impact on gasoline prices."

Gasbuddy's Dehaan noted that while an acid phaseout might be reassuring for the refineries' neighbors, others in the state may not be so happy.

"For Californians who aren't in the immediate proximity of the refiners, they want to fill their tanks with as cheap gasoline as possible," he said. "Nobody likes spending money on gas."

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India Pressures Businesses to Improve Pollution Monitoring

Posted August 18, 2017, 12:26 P.M. ET

By Madhur Singh

Businesses in India could end up paying millions to comply with new guidelines on selecting and operating equipment to monitor air emissions and wastewater discharges.

India's Central Pollution Control Board found that large and medium-size companies, and shared incinerators wastewater and treatment plants were not properly monitoring emissions including particulate matter, carbon dioxide, sulfur oxides and nitrogen oxides, and discharges, or relaying the real-time information to state or federal regulators. Among the 17 business sectors that did not meet requirements were tanneries, mining and metalworks companies, and power plants.

Despite investments worth billions of rupees to meet the regulator's monitoring requirements, originally issued in February 2014, many businesses failed to achieve significant improvement in pollution control and compliance because they installed substandard devices or incorrectly installed and operated them, Sanjeev K. Kanchan of Delhi-based nonprofit Centre for Science & Environment, told Bloomberg BNA.

The board's new guidelines specify the basic characteristics of continuous emissions monitoring system devices; suggest technologies suitable for various industries; instruct how to install, operate, maintain, and calibrate devices; as well as how much data to send to the regulator and how often. Businesses could spend between 300,000 and 10 million rupees (\$4,700 and \$155,000) each to comply with guidelines, Sankar Kannan, national manager for product automation at monitoring equipment and services company SICK India, told Bloomberg BNA by phone Aug. 16.

Many businesses that already installed analyzers are now worried that their equipment may not meet the new guidelines.

"The guidelines have specified the technology, the analyzer," Pradeep Manoor, a senior manager at JSW Energy, a power producer, told Bloomberg BNA, by phone Aug. 18. "Now the question is, do we install everything again?"

As of May 31, 2016, 1,733 industries had installed continuous emissions and effluent monitoring systems, and 667 were in the process of doing so. As many as 743 had been asked to close down for failing to respond, and the remaining had either shut down on their own or been exempted, according to a July 2016 update from the pollution control board.

Silk Road Cities Tap German Ingenuity to Tackle Climate in China

Posted August 18, 2017, 9:09 A.M. ET

By Bloomberg News

China is tapping German ingenuity to help cities at the farthest reaches of its ancient silk road adapt to climate change.

Scores of advisers from Germany and the European Union are working with officials in China to help transform hundreds of cities into oases of green power. Cleaning up China's cities has become a test for whether President Xi Jinping's government can hit pollution targets in the 2015 Paris agreement while spurring economic growth tied to its new silk road.

“The role of cities is crucial for reaching the Paris goals,” said Beijing-based Sandra Retzer, who leads urban sustainability programs at GIZ China. The German state-owned group is working in China on projects from standardizing electric vehicle technology to creating new markets for carbon-emission certificates.

At least 1 billion people in China representing 70 percent of the world’s population will move into cities by 2030, marking one of the greatest urban migrations in human history. More than \$1 trillion investment will be needed by 2020 to help those cities reverse lethal levels of pollution, according to the Green Finance Committee of China’s Society for Finance and Banking. Advice from Europe is aimed at helping authorities spend the money wisely.

The changes underway are part of bigger trends extending beyond China, where bicycle sharing services are spreading and sales of electric cars are skyrocketing.

At least 10 Chinese megacities including Guangzhou, Nanjing and Shenzhen take part in the C40 Cities Climate Leadership Group, supported by Bloomberg Philanthropies, which oversees all the charitable giving for Michael Bloomberg, former mayor of New York City. Bloomberg is also founder and majority owner of Bloomberg LP, parent of Bloomberg News and Bloomberg BNA.

Addressing Pollution

Cities like Dunhuang, more than 2,000 years old and once a major trading hub for silk road goods heading to Europe, are trying to reinvent themselves with the help of Fraunhofer Institute researchers based in Kassel, Germany.

Dunhuang’s 200,000 people “can’t take a path with a large amount of pollution and heavy energy consumption,” according to Zhu Kexiang, head of the development and reform bureau in Dunhuang, located 1,467 miles (2,360 kilometers) northwest from Beijing. “Its only path will be green development.”

Accordingly, Dunhuang generates all its power from a gigawatt-sized mix of photovoltaic panels, solar-thermal installations and hydropower plants, Zhu told a conference in Beijing last month. Germany’s Fraunhofer Institute is trying to take the city even further, making it emissions free by 2025 using heat pumps, biomass and building efficiency measures.

Changing business-as-usual acts “not only as pressure but also as a driver for cities,” said Hu Runqing, a director of industrial development research at the China National Renewable Energy Center. Higher demand for clean power along China’s Belt and Road Initiative has boosted demand for photovoltaics, Bloomberg New Energy Finance says.

In Yinchuan, a city in northwestern China that’s a vital cog on the new silk road, a large amount of solar capacity has been installed. It will hold a Sino-Arab summit next month to discuss economic and commercial cooperation under the belt and road initiative.

Climate adaptation in cities could also sustain flows into the global green bond market, which is expected to hit another record in 2017, according to analysts at HSBC Bank Plc.

“We are seeing a steady rise in green bond issuance to fund climate change mitigation and adaptation in cities,” HSBC’s Michael Ridley and Charlotte Edwards wrote earlier this month. “We anticipate a rise in local currency green emerging market city bonds, given rapid emerging market population growth and urbanization.”

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Fracking Jobs Prove Elusive for Coal Miners Looking to Switch

Posted August 18, 2017, 8:09 A.M. ET

By *Daniel Flatley*

Robert Dennis has mined coal in West Virginia for 10 years but a recent evening found him in a classroom at his local community college. He came to learn about opportunities in fracking, a drilling technique used to produce natural gas—the very fuel that is threatening coal’s future.

“I know mining inside and out,” said Dennis, a 41-year-old shift foreman from Wetzel County, adjusting the black Adidas cap on his head. But now, “I just want more doors to be open.”

He has earned a certificate in chemical and industrial operations, diligently searched job boards and filled out applications. So far, no luck.

Dennis is learning a hard lesson of fracking: While it has created a bonanza of jobs, displaced coal miners and their communities are sometimes left out of the boom. That’s because many of the jobs require highly technical skills and are often going to experienced workers brought in from out of state who then move on to the next job without sinking roots.

“There are positive employment and wage effects,” said Timothy M. Komarek, a professor of economics at Old Dominion University in Virginia. But, he said, they are “not as big as first thought when the boom first started.”

Komarek concluded in a 2016 study that total employment in a county rises by 7 percent and wages by 11 percent in the three years after fracking comes—but the gains then taper off.

When the “shale gale” hits, hotels, trailer parks and restaurants get a boost. And some landowners make money for letting drillers extract oil and gas from their property.

Millionaires Created in West Virginia

In that way, fracking has “created a lot of millionaires in West Virginia,” said Jeff Kessler, a former state senator from the state’s northern area that has both coal and natural gas. “But it has not created the employment opportunities” area residents had hoped for, he said. “The ongoing benefits are relatively minute compared to the amount of land under lease.”

That’s bad news for towns like Wetzel County’s New Martinsville where Dennis attended the community college session. While coal mines provide decades of steady work and sustain communities, a crew can frack a well in a month and leave behind automated machinery to recover the oil and gas.

The process, also known as hydraulic fracturing, involves injecting water and chemicals deep underground to break up rock and free trapped oil and gas.

It’s unlocked vast stores of previously unobtainable fossil fuel and spurred a renaissance in energy production in states that had once been coal bastions. Coal, oil and natural gas are formed from the same plant matter and other forms of prehistoric life and can be found in the same places.

Fracking Eroded Status of Coal

But fracking has eroded the status of coal, which used to generate more than half the electricity in the U.S. but had slipped to just 30 percent last year. “If there was a War on Coal, it was really declared by natural gas,” said Robert Godby, an economist at the University of Wyoming.

While some miners are hoping President Donald Trump will rescue their industry—West Virginia gave Trump 69 percent of its vote in 2016, the greatest share of the total in at least a century and a half—others are eyeing gas as an alternative employment opportunity.

The U.S. Bureau of Labor Statistics doesn’t specifically count fracking jobs, but says there were more than 422,000 jobs directly associated with oil and gas extraction in the U.S. at the end of 2016. That has far eclipsed the number of jobs in underground coal mining: about 50,000 nationwide, down from 200,000 in the 1970s.

In West Virginia, there were 11,404 coal miners last year, about half the 23,000 who were working in 2011. There are about 6,000 working in oil and gas extraction.

To be sure, the fracking boom provided a much-needed economic boost in the years following the Great Recession. Fracking supported more than half a million jobs across the Marcellus Shale, an energy-rich geological formation that stretches from New York state to Virginia, according to a report commissioned by the American Petroleum Institute, a trade association. The group’s numbers exceed the Labor Department estimates because they include workers at natural gas distribution facilities, petroleum refineries, petroleum product wholesalers and gas stations.

And much as coal and the Ohio River once lured steel plants and manufacturers to the area, cheap natural gas may bring chemical and other manufacturers to areas near shale drilling. Residents of New Martinsville, for example, are rooting for an ethane processing facility that may be built on the site of an old coal plant nearby.

Quick Boom Then Dropoff

In North Dakota, for example, the fracking boom allowed it become the fastest-growing economy in the nation by 2014. Even now, it has one of the lowest unemployment rates in the nation at 2.3 percent. But a downturn in the oil market brought drilling to a crawl and slowed investment in training and education programs.

“The boom was so quick and dropped off so quickly afterwards and the bust came so quickly that they really didn’t get it done,” said William Caraher, an associate professor of history at the University of North Dakota, of the state’s education push.

Don Riggerbach is the president of the Chamber of Commerce in Wetzel County, where New Martinsville is located, and the owner of a tile and carpet installation company. He measures the economic effect of fracking in square feet of new flooring installed. So far, he says, something has been missing.

“In my business I need houses being built,” he said. “You’d think that because of the gas and oil business they’d be hiring people. They do, but they’re out-of-state workers ... They’re not putting down roots.”

Still, former miners who have made the transition to fracking, often with the assistance of government or industry-funded programs, say they are happy.

Robert Walker says he was shocked when he was laid off from his job at a Murray Energy Corp. coal mine in Marshall County in April 2015.

Flash forward a couple of years and Walker is working for The Williams Companies Inc., a company with extensive operations in the oil and gas field. He is making less money, down to \$24 an hour from \$30 when he was working in the mines. But he likes the work, and prefers his new coworkers. He says he is “a lot happier now.”

Mine Skills Transfer Well

Curt Hippensteel, the director of the West Virginia Community College petroleum technology program, said miners have skills that transfer well to other trades, including safety training, welding and electrical work. Plus, miners are used to working long hours in austere conditions, which fits the profile of roustabout work quite nicely, he said.

But fracking, which requires the application of precise measurements of chemicals, sand and water applied under extreme pressure at specific times, requires its own set of unique skills.

And its job outlook is far from certain.

Technological improvements to fracking processes and practices have made the industry more efficient. In late 2016 and early 2017, more gas was produced using fewer workers in West Virginia than ever before.

Since 2014, gas production in the state has grown 50 percent while oil and gas employment has fall from 9,000 to less than 6,000, according to West Virginia University Bureau of Business and Economic Forecasting.

The recent recovery in prices has spurred companies to begin exploring for gas again, which may mean more hiring soon, according to Brian Lego, a West Virginia University assistant professor of economic forecasting. “But the overall level won’t be a substantial amount,” he said.

Dennis, the coal miner looking for fracking work, hopes to gain a few years experience in the oil and gas fields near New Martinsville until his children finish school.

After that, he’s ready to give up on energy altogether and seek employment in North Carolina, where he feels there is more opportunity.

“What I want is a chance to move out of the area,” he said. “There’s more industry down there.”

—With assistance from Jim Polson, Tim Loh, Daniel Levitt and Catarina Saraiva.

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Week Ahead: Chemical Society Event to Explore Industry’s Impacts

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By Chuck McCutcheon

Chemistry's global economic impact is the focus of the American Chemical Society's national meeting Sunday through Thursday, one of several environment and energy events during the week of Aug. 21.

Among the speakers at the Washington conference is Chuck Kahle, a former vice president of coatings research and development for PPG Industries, a global supplier of paints, coatings, optical products, specialty materials, and fiberglass. Kahle is expected to talk about global trends, the growing emphasis on mergers and acquisitions, and strategies to improve success rates for chemical innovations.

Ivica Labuda, a Georgetown University adjunct assistant professor of biomedical graduate education, is expected to discuss research on pesticide detection in food, while George Mason University communications researcher John Kotcher is scheduled to explain ways of engaging different audiences on climate change.

The meeting will cover a broad array of other topics, including turning plant waste into carbon fiber for cars and airplanes, designing nanoparticles to sop up sunblock from oceans to save coral reefs, and redesigning quantum dots—very small semiconductor particles—so they release fewer hazardous metals when used in televisions and other products.

News conferences from the event will be on YouTube starting Monday. Pat Rizzuto and Tiffany Stecker will cover some of the meeting's sessions.

In Other News

Eclipse impacts: Monday's solar eclipse, which is set to bring total darkness to areas of the U.S., will offer power grid operators, utilities and electricity generators a rare opportunity to test an expected dropoff of more than 12,000 megawatts of solar power supplies. Bloomberg BNA staff will monitor.

Monuments changes: Thursday is the deadline for Interior Secretary Ryan Zinke to send a final report to President Donald Trump containing Zinke's recommendations for any changes to national monuments designated since January 1996. The issue springs from two Utah national monuments—Grand Staircase-Escalante, designated that year, and Bears Ears, designated last year. Zinke issued in June his interim suggestion that Bears Ears monument be reduced in size, while Grand Staircase-Escalante—which has coal reserves and may have natural gas reserves—remains to be mentioned. Alan Kovski will track.

Nuclear reactors: The Nuclear Regulatory Commission will hold a Thursday public meeting at its Rockville, Md., offices to get feedback on reactors that do not use light water as the coolant. Both the NRC and Energy Department are interested in helping industry develop technologies for such advanced reactors. Bloomberg BNA staff will monitor.

Drinking water workshop: The Environmental Protection Agency will hold a workshop from Tuesday to Thursday in Cincinnati with the Association of State Drinking Water Administrators on handling small drinking water system challenges.

Non-animal testing: EPA scientists will take part in the Tenth World Congress on Alternatives and Animal Use in the Life Sciences in Seattle on Sunday through Thursday. They will share the EPA's scientific advances in developing alternative, non-animal testing approaches for chemicals.

Climate change gathering: U.K. business and management publisher Allied Academies is holding a Congress on Climate Change Thursday and Friday in Birmingham, England. The event will focus on innovative research supporting effective responses to climate change.

South Korea and carbon: The United States Energy Association will hold a Monday briefing in Washington on South Korea's research on carbon capture, utilization and sequestration technology. South Korean President Moon Jae-in, who took office in May, has pledged a vigorous nuclear-free shift to renewable energy and vowed to use climate change as a driver for economic growth.

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