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Ransomware: Fulfilling new federal compliance obligations and assessing preparedness to thwart or respond to attacks

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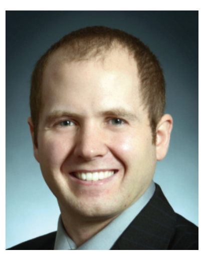


Joseph Carpini — Steptoe & Johnson, PLLC

The Colonial Pipeline is the largest fuel pipeline system in the United States. The Georgia-based company, owned and operated by Colonial Pipeline Company, transports about 45 percent of all fuel consumed on the East Coast, shipping gasoline, diesel fuel, jet fuel and other refined petroleum products from the Gulf Coast of Texas along 5,500 miles to northern New Jersey. On May 7, Colonial Pipeline suffered a massive ransomware attack. Ransomware attacks encrypt computer systems and seek to extract payments from the system operators in exchange for a key to regain access to the sensitive data. DarkSide, a hacker group believed to have roots in Eastern Europe, is thought to be the culprit.

On the morning of May 7, a Colonial Pipeline employee found a ransom note from the hackers on a control-room computer. The company's CEO, Joseph Blount, later confirmed that Colonial elected to make a $4.4 million ransom payment because executives were uncertain how badly its systems had been breached and how long it might take to restore operations. Due to the immense potential impact of an extended shutdown of the transport of so much fuel to the East Coast, the company believed it was necessary to restore operations as soon

Continues on page 19

The Colonial Pipeline cyberattack: Now it is your turn to outrun the bear

By Steve Franckhauser and Joe Baran
Bertison-George, LLC

Immobilized by ransomware and bereft of an incident response and recovery plan (IRRP), the Colonial Pipeline people find themselves in a ghoulish situation. Either they pay an exorbitant ransom or perish. And if the ransom is paid, they face the onslaught of suits, claims and congressional oversight that almost always follows an avoidable, but public catastrophe.

It is too late to help them, but it is not too late to lay your data protection foundation and create your IRRP. As the old expression goes, you do not have to outrun the bear, you only must outrun the person next to you. Well, the person next to you is gone and the bear has you in its sights.

Who is the bear?

Who wants to do you harm? The sad answer is there are too many foes to count but set forth below are some usual suspects.

Continues on page 3

Outrun the bear *Continued from page 1*

- Your competition
- Enemies of your industry
- Disgruntled employees
- Scorned vendors
- Terrorists
- Copycats
- Contractual opportunists
- Market speculators

All the excuses are gone, and surprise is an invalid and poor reason to ignore data protection, including data and cybersecurity. The lack of a single substantive law on data protection (at the federal level) has comforted some as most states lead with data protection for consumers while the self-regulating industries collectively hold their breath and hope, pray, and wish that catastrophe hits another business.

The energy sector is one of 13 separate and distinct sectors long ago identified as a prime target for data attack, cyber infiltration and conflagration. The industry has focused heavily on remote/digital monitoring and has in many cases far exceeded efficiency and cost reduction expectations. Those gains have created multiple system access points. Nearly all system operators (power grid, pipelines, generators, production wells, etc.) have several digital touch points. All of these advancements have risks associated with them. As with all risks, companies need to develop and/or review their mitigation strategies.

As we long ago professed, an attack on your business is not a matter of *IF* it is a matter of *WHEN*.

Preparation mandates you formulate and/or enhance an IRRP.

Published in 2010 and amended in 2015, the US Department of Energy in conjunction with the Department of Homeland Security set forth the "Energy Sector Specific Plan" as an amendment to its National Infrastructure protection Plan.

In its preface, the plan states as follows:

> ...
> The Energy Sector is sure to face new challenges in the future, and new opportunities and pathways will develop over time. Several areas are certain to require further efforts, including: the resilience of supply chains, interdependencies between the Energy Sector and other sectors, analyzing the Energy Sector as a system, preparation for high impact but low probability events, development, and implementation of meaningful metrics to assess sector progress, *as well as the challenge of ensuring cybersecurity. The sector will also face continuing challenges from both natural and manmade events, both foreign and domestic. (Emphasis supplied)*
> ...

Defending against data theft, cyberattacks and proprietary sabotage requires a full appreciation of the following realities:

- Your organization is a target.
- No defense is impenetrable.
- Vigilance is a requisite element to defending against threats.
- Unless your organization has a response and recovery plan, you are doomed to fail.
- Financial protections must be put in place to ensure continuity of commerce.

What must your organization do?

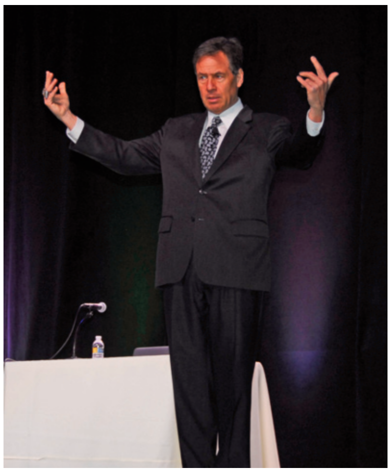
Because data protection is not a "one size fits all" endeavor, each process and IRRP must be tailored to your business.

1. Identify your business goals and data profile.
2. Identify your organizational assets, systems, and networks.
3. Assess your relative business risks and insurability.
4. Prioritize your infrastructure based on your unique energy industry profile and position.
5. Develop and implement protective programs and resilience strategies.
6. Measure your program's effectiveness and weaknesses.
7. Ascertain R&D necessities and create data protection plans commensurate with same
8. Determine, manage and coordinate SSA activities.

Finally, ponder these facts and decide if addressing this issue is worth your time:

- Colonial Pipeline has an IT team in place, yet they got hit with ransomware.
- In Q3 of 2019, the average ransom payment increased by 13 percent to $41,198 compared to $36,295 in Q2 of 2019.
- Business downtime average costs for SMBs in 2019 comes out at $141,000.
- Contractual force majeure clauses do not include ransomware attacks.
- You have spent a lifetime building a business reputation. ■

Keynote speaker Nick Deluliis of CNX. Watch his address at pioga.org > Latest News and Blog.



Nobody was sleeping for our opening speaker, Dr. Kevin Elko!

"Around the Burgh" door prize winner Dan Winklmann of ALL Crane Rental

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The crowd listens to a video message from U.S. Senator Joe Manchin.

The two Steves—Pittsburgh Pirates great Steve Blass (right) with PIOGA's Steve Rupert.

See more photos of the event by visiting the Photo Galleries section at pioga.org.

Join us on Thursday, July 15
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Ted Cranmer Memorial Golf Outing & Steak Fry

June 7, Wanango Country Club

It was a hot and humid day that greeted just over 100 PIOGA members and guests who turned out for this year's Ted Cranmer Memorial. But there were plenty of smiles, and the rain held off until the last golfers were off the course. Thanks to all who helped make the event a success, especially the sponsors listed below.

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Conventional Oil and Gas Act legislation earns House approval

The state House of Representatives on May 25 approved legislation that would ensure reasonable, responsible oversight of the conventional oil and gas industry. House Bill 1144, sponsored by Representative Martin Causer (R-McKean) passed by a margin of 113-88.

"The notion that we have to choose between the industry and the environment is a false narrative that is harmful to workers, small business owners and our local economy, not to mention the state's energy economy," Causer said following the House action. "We can and should strive to develop regulations that will both protect the environment and ensure our 160-year-old conventional oil and gas industry can remain a vital source of jobs and energy."

HB 1144 would enact the Conventional Oil and Gas Wells Act to govern the conventional oil and gas industry. The current Oil and Gas Act was enacted in 2012 to address the vastly different deep-well drilling in the Marcellus Shale.

"Nearly all of Pennsylvania's conventional oil and gas wells are owned and operated by sole proprietors or small businesses," Causer said. "These men and women live, work and raise their children in the same communities where they are drilling for oil and gas. They are capable of and committed to producing this valuable energy source while also ensuring clean air and water for themselves and future generations."

The bill, which would serve as the framework for future changes to rules impacting the conventional industry, is the latest step in a years-long fight to stop the state Department of Environmental Protection from applying regulations intended to address the more impactful unconventional industry to the smaller, conventional operations. A similar measure, Senate Bill 790, was approved by the General Assembly last year but was then vetoed by Governor Tom Wolf.

Causer pointed out that the legislation was developed in large part by members of the Penn Grade Crude Development Advisory Council (CDAC), which was created by Act 52 of 2016 to advise and assist DEP with regulatory changes impacting the conventional industry. CDAC is also tasked with developing a plan to increase production of Pennsylvania Grade crude oil and look at ways to promote the long-term viability of the conventional oil and gas industry. Causer is one of 17 members of the council, which also includes representatives from DEP.

The 68-page HB 1144 passed the House with four votes more than last year's version and now is before the Senate Environmental Resources and Energy Committee. Also before the committee is the Senate's version of the legislation, SB 534, sponsored by Senator Scott Hutchinson (R-Venango).

Even if approved this time around by the legislature, it is unclear how to avoid another veto by the governor. Wolf's DEP is focused on major revisions to two sections of the Chapter 78 conventional oil and gas regulations governing environmental protections and waste management. Additionally, environmental groups again have mobilized in opposition to the legislation, making wild and inaccurate claims about what would happen if the measure were enacted.

PIOGA continues to support passage of a Conventional Oil and Gas Act but at the same time is heavily involved in assisting CDAC and DEP's Oil and Gas Technical Advisory Board with evaluating and developing suggested revisions and improvements to DEP's draft Chapter 78 rulemaking package. ■

Federal bipartisan bill aims to clean up orphaned wells targeted in Biden plan

Bipartisan support appears to be growing on Capitol Hill to provide funds to clean up orphaned oil and gas wells that can release environmental pollutants, an issue targeted in President Joe Biden's massive infrastructure investment plan as well as the administration's budget request for fiscal year 2022.

Representatives Lizzie Fletcher (D-Texas) and Kelly Armstrong (R-North Dakota) recently introduced H.R. 3585, a bill that would create a federal cleanup program through the Interior Department and authorize $4.275 billion for orphaned well cleanup on state and private lands, $400 million for orphaned well cleanup on public and tribal lands, and $32 million for related research, development and implementation. The legislation is a companion to S. 1076, introduced April 12 by Senators Ben Ray Lujan (D-New Mexico) and Kevin Cramer (R-North Dakota).

Orphan wells are idle wells with no known operator or owner who could be held responsible for cleaning up and plugging the open well. Fletcher and Armstrong said in a June 1 statement announcing their bill's introduction that orphaned wells can leak methane, contaminate groundwater and create safety risks for neighboring communities.

The bill has the backing of the Environmental Defense Fund (EDF), Independent Petroleum Association of America (IPAA), Interstate Oil and Gas Compact Commission, and the National Wildlife Federation.

EDF Senior Vice President for Political Affairs Elizabeth Gore said in a statement that the introduction of the legislation "in the House is an important demonstration of bipartisanship that supports local economic development and addresses environmental hazards," noting the effort will also put people back to work.

"This is an important piece of the overarching reforms—including reforms to bonding and other policies that prevent wells from becoming orphaned in the future—needed to reduce the environmental impact of the oil and gas industry," Gore said.

IPAA President & CEO Barry Russell also praised the legislation, saying that while states have been acting to plug these wells for decades, the bill "would provide additional funds for these state programs and aid their initiatives and the workers who undertake these efforts during the difficult fiscal times caused by the COVID-19 pandemic."

H.R. 3585's funding levels are lower than those in a Democratic bill introduced in April by freshman Representative Teresa Leger Fernandez (D-New Mexico), which mirrors the initial Biden infrastructure plan's call for $8 billion to address orphaned wells over several years.

During an April 14 hearing on Leger Fernandez's bill in the House Natural Resources Committee's energy and mineral resources panel, Representative Bruce Westerman (R-Arkansas), ranking member on the full Natural Resources Committee, said the issue of addressing orphan wells was a bipartisan one. But Westerman said the Leger Fernandez "bill is swinging the baseball bat at a gnat" and called for "more reasonable" legislation.

Biden budget request

The Biden administration's FY22 budget request includes "over $580 million to remediate thousands of abandoned oil and gas wells and reclaim abandoned mines," according to a summary of the budget, which adds that this more than triples the current annual discretionary spending on this issue.

Josh Axelrod, a senior advocate in the Natural Resources Defense Council's Nature Program, praises the inclusion of increased funding for orphaned and abandoned wells in the Biden budget, writing in a June 1 blog post that orphaned and abandoned wells have become a growing problem in the United States, with EPA estimating that as of 2016 there were 3.1 million such wells. Because of record-keeping lapses, that number may be even higher, with some researchers finding well over 1 million "undocumented" wells, meaning their locations and status are unknown, Axelrod writes.

Estimates vary widely on the cost to remediate these wells and the ongoing harms they cause for individuals and communities near them, which can include chronic health issues from exposure to seeping toxic gases and risks of structural damage for buildings unknowingly constructed on top of them, he says.

But the costs of fixing the problem are substantial, Axelrod writes. A recent study examining the issue in New Mexico found that the cost for remediating just that state's orphaned and abandoned wells would be north of $8 billion, he says. "Nationally, Carbon Tracker has put a $280 billion price estimate on the problem, and that doesn't even include the million plus undocumented wells, which will not only be costly to plug, but also costly to locate," he adds.

—Inside EPA

Are you a plugging contractor or interested in working as one?

The Pennsylvania Department of Environmental Protection would like to be able to plug more orphan and abandoned wells than state funding now allows for. DEP officials are certain that federal legislation as described in the accompanying article will be enacted, providing a large pool of money with which to plug wells. In anticipation, DEP not only wants to develop a list of "shovel ready" plugging projects that could be bid quickly, but the department also wants to identify qualified contractors interested in such projects.

PIOGA would like to ensure our members are included in DEP's pool of qualified contractors. If your company currently provides contract plugging services, or if you have plugging experience with your own wells and would be interested in contracting, please contact PIOGA's Dan Weaver at dan@pioga.org or 724-933-7306 ext. 30.

Shapiro, Southeast PA Dems want new oil and gas industry restrictions

With the support of state Attorney General Josh Shapiro, Democratic lawmakers from the Philadelphia area are introducing a package of bills meant to tighten up regulations on Pennsylvania's shale gas industry.

The legislation came as a response to last summer's grand jury report on the unconventional oil and gas industry. The report accused the Department of Environmental Protection of failing to protect residents from the health impacts of unconventional natural gas development *(July 2020 PIOGA Press, page 1)*. Shapiro said during a May 25 press conference announcing the bills that the grand jury report found a gap between the public's constitutional rights to clean air and water and the reality of the law.

"For far too long, fracking companies and regulators turned a blind eye to the health and safety impact of this industry on hard working Pennsylvanians, their communities and their families," he said.

The legislation addresses the eight recommendations made by the grand jury, including expanding setbacks from 500 to 2,500 feet, requiring public disclose all chemicals used in drilling and completion before they're used, and regulating transport of the material by defining it as a hazardous waste.

Additionally, the legislation would give the Office of Attorney General criminal jurisdiction over environmental crimes. The attorney general's office now can intervene only after a referral from a local district attorney, DEP or another agency with jurisdiction.

The legislation also would bar DEP employees from working in the oil and gas industry immediately after leaving the department and would regulate natural gas gathering lines.

The grand jury report was released last June with a splashy press conference in which Shapiro displayed a jar of cloudy brown liquid. It was well water from a resident who said their water had been contaminated by fracking, he said.

Shapiro recounted how residents told the grand jury about the various health issues they they suffered from living near unconventional drilling sites, including sores, ulcers, rashes, breathing issues and stomach ailments. Pets and livestock became ill and some died, he said.

"The grand jurors heard repeated testimony of small children waking up with severe nosebleeds. One parent testified that her 4-year-old daughter was waking up crying with blood pouring out of her nose," Shapiro said, during the press conference. Joining him at the press conference were state Senators Steve Santarsiero, Maria Collett, Katie Muth, John Sabatina and Carolyn Comitta, who will sponsor and co-sponsor the bills. All Democrats are from the Philadelphia area.

The report was the result of a two-year investigation that included testimony from 70 households. Current and former state employees also testified. The DEP responded to the report, saying it presented an "inaccurate and incomplete picture of Pennsylvania's regulatory program." The department defended itself in a 49-page response.

Republican Senator Gene Yaw, chair of the Senate Environmental Resources and Energy Committee, said in a statement May 25 that the report was an effort to peddle misinformation and defended the DEP's work to regulate the oil and gas industry.

"In 2019, 700 wells were drilled in Pennsylvania. At the same time, there were 19,485 inspections of the industry. What other employer in Pennsylvania has regulators on its doorstep that many times in a year?" Yaw said.

He continued, "Today's performance for the media is part of the ongoing effort to peddle misinformation and ignore the high standards used in the Commonwealth to regulate natural gas development. Pennsylvania's standards are among the most protective in the nation. Act 13 of 2012 raised over 40 environmental standards including appropriate handling of waste and protecting water resources. Pennsylvania's Impact Tax has provided over $100 million to DEP and county conservation districts to enforce our environmental standards.

"To protect communities, we have enacted new pipeline safety standards and emergency response requirements all while guiding billions of dollars in investment to Pennsylvania, providing countless jobs for local residents, ensuring significant energy savings for consumers and improving air quality for all."

The legislation is all but guaranteed not to advance in the Republican-controlled General Assembly, but will likely be used to political advantage by Shapiro as a Democratic candidate for governor in 2022. ■

DEP advisory committees vote to support RGGI

In what the Department of Environmental Protection must have dubbed "RGGI Week," four of the department's advisory committees voted during the week of May 17 to support the department's final-form regulations establishing CO2 reduction program for Pennsylvania's power plants and paving the way for the Commonwealth's participation in the Regional Greenhouse Gas Initiative.

Meanwhile, Pittsburgh Works Together—a regional collaboration of business, manufacturing, energy and labor—has warned that participation in RGGI does not make financial sense and will eliminate Pennsylvania jobs rather than create them, as DEP claims.

Among the advisory committees voting support DEP's final RGGI regulations at meetings between May 17 and 20 were:

—Air Quality Technical Advisory Committee, 10 in favor, 8 opposed and 1 abstention;

—Citizens Advisory Council, 8-5-1;

—Small Business Compliance Advisory Committee, 4-3; and

—Environmental Justice Advisory Board (no vote tally listed).

For some of the advisory committees, the actions were a reversal of votes taken on the preliminary version of the rulemaking. Significantly, however, none of the votes represented overwhelming support for the Wolf administration's CO2-reduction scheme.

Concerns raised by Pittsburgh Works

On May 19, Pittsburgh Works Together delivered a statement at an event sponsored by the Power PA Jobs Alliance, making these points about Pennsylvania's participation in RGGI:

• RGGI will eliminate Pennsylvania jobs and replace them with overseas jobs. "Mandating and subsidizing wind and solar generation will reduce the demand for natural gas and result in the destruction of high-paying, family-sustaining jobs in Pennsylvania," the statement said. "The beneficiaries will be countries like China that not only fail to pay family-sustaining wages, but that also embrace a complete disregard of human rights where the materials are mined and manufactured for solar panels and wind turbines."

• RGGI relies on solar and wind, which are not reliable sources of electricity at scale.

• RGGI does not make financial sense. "Pennsylvania is about to eclipse $2 billion in impact fee revenue from the natural gas industry this summer. That does not include corporate and payroll taxes paid by the natural gas and associated industries. Mandating, subsidizing, and protecting solar and wind will undercut a $2-billion-plus revenue generator for the state and replace it with cash outflows in the forms of various subsidies and lost business profits. The incremental budget hole that is self-inflicted by RGGI will hit education, local communities, public services and government budgets at the worst possible time," Pittsburgh Works argued.

Pittsburgh Works also issued a May 19 research brief (pghworks.com/research-brief-deps-confounding-job-numbers-for-rggi) analyzing the data used by DEP to support RGGI. While the department has told the Environmental Quality Board that RGGI will result in a net increase of more than 30,000 Pennsylvania jobs by 2030, the research brief shows that Governor Wolf's preferred option for using funds generated by the program would create *fewer* jobs than by not joining RGGI.

"RGGI may have other benefits for Pennsylvania. But when DEP says raising electricity prices will help create additional jobs for Pennsylvania residents, be sure to ask to see the numbers," the brief concluded.

Legislative action

On June 8, the House Environmental Resources and Energy Committee approved House Bill 637 (Struzzi, R-Indiana). The legislation would create the Pennsylvania Carbon Dioxide Cap and Trade Authorization Act, which would establish the process for legislative approval before Pennsylvania could impose a carbon tax on employers engaged in electric generation, manufacturing, or other industries operating in the Commonwealth, or enter into any multi-state program, such as RGGI, which would impose such a tax.

Joining the committee's Republicans in voting for the bill's passage were Democratic Representatives Manuel Guzman of Berks County along with Pam Snyder of Greene County.

Companion legislation, Senate Bill 119 (Pittman, R-Indiana) was approved in April by the Senate Environmental Resources and Energy Committee *(May PIOGA Press, page 3)* and it before the Appropriations Committee.

The General Assembly approved legislation last year blocking the Wolf administration's unilateral approach to joining RGGI, only to have it vetoed by the governor. The result is likely to be the same this time around. Harrisburg-watchers anticipate the RGGI regulations will continue on their fast track to approval and that the whole issue will ultimately be decided by the courts. ■


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EPA's proposed budget highlights Biden administration focus on environmental justice concerns

Author:

Ben Clapp
—
Babst Calland

The proposed budget for fiscal year 2022 for the U.S. Environmental Protection Agency (EPA), submitted to Congress on May 28, provides important insights into the agency's priorities in the coming years under the Biden administration. Broadly speaking, the proposed budget, which is the largest ever in absolute terms, emphasizes what the agency describes as "four cross-cutting priorities: Tackling the Climate Crisis through Science, Advancing Environmental Justice, Supporting State, Tribal and Local Partners and Expanding the Capacity of EPA." These points of emphasis are generally consistent with expectations and with earlier environmental policies adopted by the Biden administration, including the executive order on "Tackling the Climate Crisis at Home and Abroad" (E.O. 14008).

While the agency priorities set forth in the proposed budget are perhaps not particularly surprising, the prominence in the budget of advancing environmental justice, a topic with potential impacts on the oil and gas sector, is unprecedented. (Note, for example, that the terms "environmental justice" or "EJ" appear more than 400 times in the EPA's lengthy budget justification document, compared to just over 40 times in the fiscal year 2021 document.) While environmental justice considerations have been a component of EPA's work since the 1990s, the Biden EPA is poised to bring it to the forefront of environmental decision making. This heightened emphasis is also reflected in EPA Administrator Michael Regan's April 7 message to EPA staff, in which he stated that the agency would do more to address environmental justice concerns, including:

- Strengthening enforcement of violations of cornerstone environmental statutes and civil rights laws in communities overburdened by pollution.
- Taking immediate and affirmative steps to incorporate environmental justice considerations into EPA's work, including assessing impacts to pollution-burdened, underserved and tribal communities in regulatory development processes and to consider regulatory options to maximize benefits to these communities.
- Taking immediate and affirmative steps to improve early and more frequent engagement with pollution-burdened and underserved communities affected by agency rulemakings, permitting and enforcement decisions, and policies.
- Considering and prioritizing direct and indirect benefits to underserved communities in the development of requests for grant applications and in making grant award decisions, to the extent allowed by law.

Collectively, Administrator Regan's message to staff and the proposed budget reflect the EPA's clear strategy of "embedding environmental justice principles in all agency programs." The EPA's proposed approach to advancing environmental justice would start at the top, with the creation of a national environmental justice program office, headed by an assistant administrator subject to Senate confirmation. The environmental justice office would oversee the new Accelerating Environmental and Economic Justice initiative, funded with an allocation of more than $930 million from the proposed budget and would be tasked, in part, with making "historic investments in environmental justice programs to address the disproportionate health impacts of communities overburdened by pollution sources." The different approaches toward environmental justice reflected in the 2021 and 2022 proposed budgets are striking. For example, the proposed budget for 2022 allocates over $298 million toward environmental justice-related enforcement activities, compared to just over $12 million for the 2021 proposed budget.

The advancement of environmental justice would play a role in each of EPA's budgeted programs. EPA's intended approach for advancing environmental justice within the context of certain specific programs is set out below.

Compliance and enforcement

EPA promises to "develop and implement a comprehensive action plan for integrating environmental justice and climate change considerations throughout all aspects of its enforcement and compliance assurance work." To that end, the proposed budget allocates $31.9 million in additional funds towards EPA Compliance Monitoring program, with the goal of incorporating environmental justice considerations into all phases of the compliance and enforcement process, without using funds needed for the agency's other compliance and enforcement activities.

EPA intends to increase environmental justice-focused inspections and community outreach and to prioritize environmental justice in case selection. The agency has also identified several current enforcement initiatives that will be employed to advance environmental justice, including three that are relevant to the oil and gas sector: Creating Cleaner Air for Communities, which focuses on noncompliance that results in excess emissions of either volatile organic compounds or hazardous air pollutants; Reducing Risks of Accidental Releases at Industrial and Chemical Facilities, which focuses on decreasing the likelihood of chemical accidents and reducing risk to communities; and Reducing Significant Non-Compliance with National Pollutant Discharge Elimination System (NPDES) Permits, which focuses on improving compliance rates with NPDES permits.

Climate change and air programs

In the proposed budget, EPA states that "some people and communities are especially vulnerable to poor air quality and the impacts of climate change, and communities with environmental justice and equity concerns bear a disproportionate share of the risks and impacts." Climate change is described as "a public health and environmental justice crisis." EPA considers the two issues so entwined that the approximately $930 million that would be directed toward advancing environmental justice is actually a portion of the funds allocated to "tackling the climate crisis." The proposed budget allocates funds to characterize "disproportionate impacts of climate change and air pollution in communities with environmental justice and equity concerns, identify and evaluate strategies to reduce impacts in those communities, and develop and evaluate innovative multipollutant and sector-based approaches to preventing pollution." With respect to sector-based pollution, EPA intends to focus on individual sectors' emissions comprehensively with an eye toward prioritizing efforts to address the sources and pollutants of greatest concern to overburdened communities.

As part of that process, EPA requests $100 million for "a new community air quality monitoring and notification program to support efforts to deliver environmental justice for overburdened and marginalized communities." The system would provide real-time air quality data to the public in communities most impacted by air pollution. Relatedly, EPA also vows to improve its risk assessment capabilities to identify and determine impacts of exposures to air toxics on communities.

Oil spill prevention, preparedness and response

The agency has requested an increase in funding for the Oil Spill Prevention, Preparedness and Response program in connection with increasing the program's focus on "expanding enforcement of environmental justice-related regulations and increased polluter accountability within environmental justice communities." This will include conducting off-site compliance monitoring activities, allowing inspectors to make compliance determinations from remote locations. EPA would focus inspections at Facility Response Plan facilities and consider targeting its inspections to promote compliance in environmental justice communities.

Superfund

Superfund-related environmental justice initiatives would focus on issues affecting people of color, low income and indigenous communities near Superfund sites. EPA intends to employ its Superfund Enforcement Program to leverage CERLCA and RCRA authorities to "investigate and prevent threatened releases in climate-sensitive and overburdened communities." EPA also plans to increase community engagement, including requiring Potentially Responsible Parties to provide funding assistance to help communities understand the technical aspects of Superfund remedies.

Although the proposed EPA budget for fiscal year 2022 may not be adopted in the same form as submitted to Congress, the document, along with other recent agency communications and E.O. 14008, clearly demonstrates the Biden administration's strong intent to emphasize environmental justice considerations across all EPA programs. While the impacts of these initiatives will only be known after the passage of time, the EPA's focus on environmental justice may alter the agency's decision-making on permitting, compliance, enforcement and environmental response matters in ways that could materially impact the oil and gas sector. ■

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Garrity joins state treasurers warning Biden administration, banks against divesting from fossil fuels

Pennsylvania Treasurer Stacy Garrity was among 15 state treasurers to sign a letter to the Biden administration, threatening to cut ties with any banks or financial institutions that refuse to lend to or invest in coal, oil or natural gas.

The letter came following reports that climate envoy John Kerry had been personally urging financial institutions to commit more strongly to climate-friendly policies and after President Joe Biden's recent executive order directing federal agencies to examine the risk that climate change poses to the country's financial system.

In their letter, the state treasurers say they disapprove of the Biden administration encouraging private industry toward climate-friendly policies, while saying they intend to put banks and financial institutions "on notice of their position."

"As the chief financial officers of our respective states, we entrust banks and financial institutions with billions of our taxpayers' dollars," the letter reads. "It is only logical that we will give significant weight to the fact that an institution and tactics that will harm people whose money they're handling before entering into or extending any contract."

Signatories included treasurers from West Virginia, Ohio, Oklahoma, Nebraska, South Dakota and more, all of whom say their states are dependent on the jobs and revenue that the fossil fuel industry provides.

"These companies play a critical role in the economies of many hard-working, middle-class communities across Pennsylvania and the United States," Garrity said in a statement following the letter. "They rely on and deserve access to capital from financial institutions, just like any other law-abiding American company."

While the six largest banking institutions in the United States—Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley and Wells Fargo—have in the past committed to achieving net-zero emissions by 2050, Politico reported that only Bank of America, Citigroup and Morgan Stanley have signed on to the recent Net-Zero Banking Alliance, a UN-led attempt to have banks align their investments with net-zero emissions goals.

Pennsylvania's treasury is responsible for more than $100 billion in public funds. Garrity, who was elected in November 2020, is the first Republican to hold the office in nearly two decades.

—The PLS Reporter

Marginal Well Credit for 2020 natural gas production announced

By Bill Phillips, Arnett Carbis Toothman, llp
Chair, PIOGA Tax Committee

The Internal Revenue Service announced on June 4 in Notice 2021-34 that the Marginal Well Production Credit (MWC) for natural gas production from qualifying wells in calendar year 2020 is $0.66 per Mcf for the first 18 Mcf of daily production.

The MWC rates for prior years were 2019 production, $0.08; 2018 production, $0.00; 2017 production, $0.51; and 2016 production, $0.14 per Mcf for the first 18 Mcf of daily production from a marginal well. The credits may be used to offset regular income tax but may not offset alternative minimum tax. Any unused credit in a year is carried back five years to obtain refunds. Any remaining unused credits are carried forward up to 20 years to offset future years' income tax.

If you have questions about this announcement or the application of these tax credits, please contact Marlin Witt (marlin.witt@actcpas.com or 304-346-0441) or Bill Phillips (bill.phillips@actcpas.com or 304-624-5471). ■

PIOGA Centennial commemorative knife closeout sale!

As part of PIOGA's 2018 celebration of 100 years of working together as a trade association on behalf of Pennsylvania's crude oil and natural gas industry, we commissioned a commemorative knife from W.R. Case & Sons Cutlery Company.

The collector-quality knife and wooden storage box feature PIOGA's 100th Anniversary logo. It's a great collector's piece and also makes a unique gift for coworkers, industry colleagues and petroleum history enthusiasts. Only 100, individually numbered knives were made.

The knives originally sold for $100. We're making the last few available for just $75. To get yours before they're all gone, email Deana McMahan at deana@pioga.org today! ■

Penneco opens Allegheny County wastewater disposal facility

The largest commercially permitted wastewater disposal facility in Pennsylvania became operational when Penneco Environmental Solutions, LLC opened its SEDAT UIC Class II disposal well in Plum Borough, Allegheny County, in May. From conception to reality, the project took six years, including four years just for permitting.

The facility is permitted to accept up to 108,000 barrels per month. Produced water and flowback can be accepted from conventional oil and gas wells, Marcellus and Utica wells, and Oriskany wells. Located conveniently to all Southwest Pennsylvania oil and gas activity, the facility has the ability to offload three trucks simultaneously.

Despite being a U.S. EPA-regulated Class II UIC well, the SEDAT facility was constructed to the higher Class I standard to exceed all Pennsylvania Department of Environmental Protection and EPA requirements. The entire facility, including truck offload, has concrete secondary containment underlain by 60 mil tertiary containment. The plant is fully automated with digital controls and sensors, and the entire system has redundant analog controls which operate outside of the digital system. The annulus of the injection string is continuously monitored for changes in both pressure and fluid volume. An offset monitoring well on the property records any formation fluid level changes. Redundant dual seismometers onsite are tied into Pennsylvania's seismic network and monitored 24/7 for seismic activity.

The Injection zone is the Murrysville formation at 1,940 feet.

Penneco's SEDAT wastewater disposal facility.

Penneco applied for the EPA UIC permit in May 2016 and received it in March 2018. The DEP permit process took just over two years, from application in March 2018 to approval in April 2020. The EPA issued authorization to inject on December 31, 2020. Injection operations commenced in late February 2021, with the facility beginning full-scale commercial operation on May 10.

As summed up by Marc Jacobs, Senior VP, "We've been in the industry for decades, so we know first-hand the challenges associated with water logistics and frustration of maintaining options for disposal of produced fluids. Penneco is pleased to be able to provide a greatly needed solution for conventional and unconventional operators alike as we navigate an ever-changing regulatory environment. It's been a long time in the works and has been well received by industry."

All deliveries must be pre-certified prior to acceptance. For unconventional wells, Form 26R analysis is accepted. For conventional wells, the Conventional Brine "Generator Knowledge Statement" prepared by PIOGA (available on PIOGA's members-only website) is acceptable.

For more information, visit pennecoenvironmentalsolutions.com.

Cook succeeds Palmer at ARG

David Cook

American Refining Group Inc. (ARG) announced that David Cook has been selected to succeed the late Dan Palmer as its crude-producer-relationship manager in Pennsylvania and New York. Palmer, who represented ARG on the PIOGA Board of Directors, passed away February 22 from complications due to COVID-19.

ARG Vice President, Crude Supply and Logistics Bill Murray said, "Dan was a very important member of our team. He served ARG, our Pennsylvania and New York crude suppliers and the entire Bradford community extremely well throughout his career. We feel fortunate to have identified an experienced industry professional in David Cook to succeed Dan in such a critical role for us."

Cook comes to ARG from Reliance Well Services in Erie, where he served as sales manager since early 2015. Prior to his time with Reliance, Cook worked nine years as field sales rep with Universal Well Services in Meadville, where he began his oil-industry career as a frac hand in 1996. He earned promotion to well site supervisor in 2004, the role in which he served until being named field sales rep in 2006.

"David is very familiar with the conventional oil industry and the importance of building and maintaining strong and positive relationships with all stakeholders," Murry said. "David also appreciates the importance of supporting all the industry associations like the Pennsylvania Grade Crude Coalition, Pennsylvania

Independent Oil & Gas Association and Pennsylvania Independent Petroleum Producers as well as the New York State Oil Producers Association and Independent Oil & Gas Association. He understands the vital importance of these networks and positive supplier relationships to ARG and all of the conventional producers we rely on every day."

Cook's primary responsibility is to serve conventional crude oil producers and to secure long-term crude supply for ARG's Bradford refinery. He will partner with conventional crude oil producers to ensure their customer service and hauling needs are met and that all crude oil meets ARG's quality guidelines.

A graduate of Townville High School, Cook studied computer programming and advanced mathematics at Crawford County Career & Tech Center. He resides in Edinboro. ■

Members talk about the value of PIOGA membership

Appellation Construction Services is a general contractor offering civil, electrical and mechanical services and our start was focused on Marcellus pipeline facility work. Throughout our continued growth and expansion of services, we have appreciated the opportunities to network and participate in conferences and meetings that PIOGA offers. In addition, information trainings and seminars, committee meetings, and conference calls have offered opportunities to advocate for/support proposed projects, learn about new and innovative technologies, and contact those developing projects where we may offer services. We have also accessed the legal services we appreciate as a PIOGA member and we are thankful knowing PIOGA is fighting for our industry in government matters.

I often promote PIOGA membership to others who are not aware of all the benefits offered. I appreciate that industry businesses of all sizes are welcomed and represented by PIOGA. Staff members are always responsive, kind, helpful, and well-informed. Above all, I encourage potential new members to be involved! Take advantage of the many events and meetings PIOGA offers to learn from other members and promote what you can offer as well. There is value in this membership and it is up to you to maximize that value!

Sandy Spencer
Business Development Specialist
Appellation Construction Services, LLC

Call for PIOGA Board of Directors nominations

PIOGA's Executive Committee is calling for the next leaders in the industry to step forward. The PIOGA Board of Directors is instrumental in providing leadership and direction for the association and for the oil and gas industry in Pennsylvania. The Executive Committee is now soliciting nominees to fill the open board seats. Nominees will serve a three-year term, 2021-2024. Under the bylaws, any Full PIOGA Member (this excludes Associate, Royalty Owner, Student and Emeritus members) is eligible for nomination and election.

If you would like to nominate someone or self-nominate, email Danielle Boston at danielle@pioga.org with the name, contact information and, if possible, bio/resume of the candidate. **The nominations deadline is June 30 at 5 p.m.** It is recommended that each nominator review the General Board Expectations at pioga.org/publication_file/PIOGA_General_Board_Expectations.pdf prior to making a nomination.

Please don't hesitate to contact Dan Weaver at 724-933-7306 ext. 30 if you would like to discuss the board position or potential nominees. ■

Pennsylvania's unheralded benefit from shale gas production

By Elizabeth Miller, Research Associate
Allegheny Institute for Public Policy

Over the years, opponents of shale gas drilling have debated its economic benefits, yet recent evidence suggests it still provides considerable value to the Commonwealth.

Both royalty payments and shale gas production continued to increase across the state over the 2011-2018 period. This Policy Brief looks at counties in the Pittsburgh area as well as some in the northern tier of the state that are among the busiest producers of natural gas from the shale formations (Marcellus and Utica), namely Allegheny, Armstrong, Beaver, Bradford, Butler, Greene, Fayette, Sullivan, Susquehanna, Tioga, Washington and Westmoreland.

Landowners who own property over natural gas pools can earn lease payments from their land along with royalty payments on the gas extracted from their property. Royalty payments are paid to the landowner based on the value of gas extracted from the wells on leased property. Each lease is established by an individual contract. However, the Pennsylvania Oil and Gas Lease Act, which was amended in July 2013, sets a minimum royalty payment of 12.5 percent of the value of the natural gas removed from the property.

The lease varies by landowner/property and is the legal contract that allows the natural gas company to drill on the property. The lease will define the time period for drilling and the royalty payments rate. Also, the lease usually specifies a one-time bonus payment. Included in the lease will be the details of the rental payment. Typically, the rental payment is made annually but it varies with each contract.

The most recent Pennsylvania income tax revenue data available is from 2018. Of particular interest is the category of "rent, royalties, patents and copyrights" which is defined as "income received for the use of real or tangible property, the use of a patent or copyright, or the extraction of coal, oil, gas or other minerals." This would capture any taxable income associated with the royalties from natural gas activity.

The majority of counties in the study group continued to show increases to this category on state tax returns, demonstrating the enduring economic benefit of natural gas drilling. The table below displays the total amount of taxable income from "rent, royalties, patents and copyrights" for 2011 and 2018 for Pittsburgh's Metropolitan Statistical Area (MSA). The last column shows the dollar change between 2011 and 2018. Every county except Beaver had an increase. Therefore, it is evident that drilling of natural gas in the shale formations has continued over the years to generate revenue for many landowners in Pittsburgh's MSA.

The table also shows the total amount of taxable income from "rent, royalties, patents and copyrights" for four counties outside Pittsburgh's MSA. Two of these counties experienced increases to this income tax category, with two showing declines.

Susquehanna County's total amounts rose by an astonishing by $165 million between 2011 and 2018. Greene County also rose by an impressive $74 million for the same period.

Beaver, Bradford and Tioga counties were outliers. These counties had a small drop to the total amount of taxable income from "rent, royalties, patents and copyrights" from 2011 to 2018. However, they still had a higher amount in 2018 than in 2006 (pre-drilling).

For example, Beaver County's total amount of taxable income from "rent, royalties, patents and copyrights" was $22.1 million in 2006. By 2011 it had grown to $85.8 million. In 2012 the county's highest reported amount was $102.9 million. In 2018 the total amount reported was $72 million. Although a decrease from previous years, it is still significantly higher than pre-drilling years. Bradford ($15.7 million in 2006) and Tioga ($8.5 million) counties follow a similar pattern.

	Rent, royalty, patent and copyright taxable income (millions)			Shale production (millions of Mcf)		
County	**2011**	**2018**	**Change**	**2011**	**2018**	**Change**
Allegheny	$475.8	$588.3	$112.50	2.48	106.72	104.24
Armstrong	$26.4	$27.5	$1.10	6.23	56.54	50.31
Beaver	$85.8	$72.0	$-13.80	0	38.10	38.10
Butler	$143.4	$190.0	$46.6	11.64	216.61	204.97
Fayette	$60.5	$68.7	$8.20	25.6	60.16	34.56
Washington	$274.6	$425.7	$151.10	113.92	1,164.39	1,020.47
Westmoreland	$144.9	$153.4	$8.50	21.77	77.92	56.15
Bradford	$167.3	$125.5	$-41.80	287.70	765.24	477.54
Greene	$61.1	$135.2	$74.10	118.92	798.35	679.43
Susquehanna	$83.3	$248.3	$165.00	201.47	1,464.73	1,263.26
Tioga	$74.6	$62.2	$-12.40	126.61	301.43	174.82
Statewide	$5,830.9	$7,518.8	$1,687.90	1,066	6,123	5,057.6

Royalty payments are based on the price of natural gas and the amount of gas produced. The price of natural gas has varied throughout the years. In 2011 the yearly average price was $4.01 (Henry Hub price on the New York Mercantile Exchange in dollars per million Btu). From 2012 to 2017 the range went from a high of $4.12 (2014) to a low of $2.56 (2015). In 2018 the average price was $3.12, a difference of 22 percent from 2011. The past price fluctuations are reflected in the varied royalty payments throughout the years.

And, of course, royalty payments also depend upon production levels. Natural gas production numbers from unconventional shale wells in Pennsylvania, reported by the Department of Environmental Protection, continue to increase annually. Total statewide production from unconventional wells increased from 1.065 billion Mcf in 2011 to 6.123 billion Mcf in 2018—an increase of 5.057 billion Mcf.

In Pittsburgh's MSA, Washington County had the highest production with 1.164 billion Mcf in 2018—an increase of 1.05 billion Mcf from the 113.9 million Mcf produced in 2011. Butler County produced 216.6 million Mcf in 2018—up 204.97 million Mcf from the 11.6 million Mcf in 2011. Allegheny County's jump was also impressive, rising from just 2.48 million Mcf in 2011 to 106.72 million Mcf in 2018. Comparing 2018 production to 2011, indicates the surge in production levels substantiates the increase in royalty payments to landowners. Even in the counties where taxable income on royalties had fallen, there were increased production levels from unconventional wells within their borders.

It is evident that during the 2011-2018 period Pennsylvania continued to benefit financially from natural gas drilling in the shale formations. One of the often-overlooked benefits occurs with the increase in royalty payments to landowners and the state benefits from the taxes on that income. ■

Ransomware *Continued from page 1*

as possible; however, despite making the ransom payment, the decryption tool provided by the hackers proved insufficient to immediately restore operations, and the pipeline was shut down for six days.

Although the federal government is not often involved in responding to private sector cyber-attacks, the Cybersecurity and Infrastructure Security Agency (CISA) quickly sought information from Colonial Pipeline about the attack, due to its widespread impact, in an attempt to learn how the attack had occurred and to take steps to ensure hackers could not repeat the attack in the future.

Colonial Pipeline elected to share information with CISA, as well as the FBI and the U.S. Department of Energy; however, in the weeks since the attack, other federal agencies have acted to mandate information sharing under certain circumstances. Businesses must be mindful of how these new compliance obligations may impact their work.

United States' response

Executive Order 14028. Largely in response to this attack, as well as the recent cyber-attacks on SolarWinds and Microsoft Exchange, President Biden issued Executive Order 14028 on May 12, with the broad goal of improving cybersecurity defenses. The executive order calls for updated contract language for IT service providers contracting with the federal government, in order to remove contractual barriers preventing those service providers from sharing information with the government. The order also requires those providers to share breach information that could impact government networks. By updating the federal government's cybersecurity standards and establishing baseline security standards for development of software sold to the government, the Biden administration hopes for a trickle-down effect to improve private sector security standards and to enhance businesses' security performance.

Specifically, the executive order creates a "standardized playbook" for cyber incident response by federal departments and agencies, increases efforts to detect malicious cyber activity on federal networks, and establishes a Cybersecurity Safety Review Board. The Cybersecurity Safety Review Board is to be co-chaired by government and private sector leads and may convene to analyze significant cyber incidents and recommend steps to prevent repeat incidents, similar to the way the National Transportation Safety Board issues reports after airplane crashes. Federal legislation also has been introduced in a further effort to prevent future ransomware attacks on the country's energy infrastructure.

FERC. Even before the Executive Order was finalized, the Federal Energy Regulatory Commission (FERC) issued a statement on May 10, urging renewed action to secure and safeguard the nation's energy infrastructure. Chairman Richard Glick noted that although FERC "has established and enforced mandatory cybersecurity standards for the bulk electric system" for over 10 years,

> there are no comparable mandatory standards for the nearly 3 million miles of natural gas, oil, and hazardous liquid pipelines that traverse the United States. It is time to establish mandatory pipeline cybersecurity standards similar to those applicable to the electricity sector. Simply encouraging pipelines to voluntarily adopt best practices is an inadequate response to the ever-increasing number and sophistication of malevolent cyber actors. Mandatory pipeline security standards are necessary to protect the infrastructure on which we all depend.

It appears that these comments by FERC's chair spurred the Transportation Security Administration (TSA) to enact new mandates for critical pipeline and natural gas facility owners and operators.

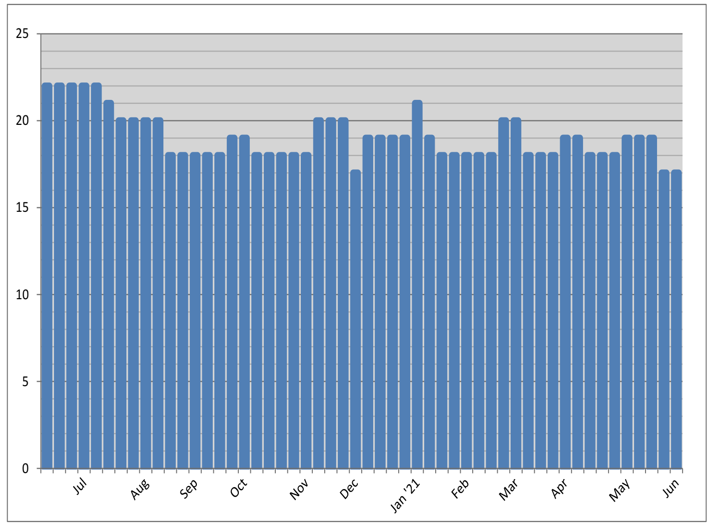
TSA. On May 28, the TSA issued a directive, effective until May 28, 2022, pursuant to its authority under 49 U.S.C. 114(d), (f), (l) and (m). The directive requires critical pipeline and natural gas facility owners and operators to take three steps. First, they must report cybersecurity incidents to CISA within 12 hours of identifying the incident. Second, owners and operators must designate a cybersecurity coordinator who is required to be available to TSA and CISA at all times to coordinate cybersecurity practices and address any incidents that arise. Finally, those owners and operators are required to review their current activities against TSA's pipeline cybersecurity recommendations to assess cyber risks, to identify gaps in their activities and develop remediation measures, and to report the assessment results to TSA and CISA. The directive indicates that TSA determines whether a pipeline or facility is "critical" based upon a number of factors, including volume of product transported, service to other critical sectors, etc., referring to section 1557(b) of the *Implementing Recommendations of the 9/11 Commission Act of 2007*, Pub. L. 110-53 (121 Stat. 266; Aug. 3, 2007) (9/11 Act) (codified at 6 U.S.C. § 1207).

DOJ. On June 3, the United States Department of Justice (DOJ) sent internal guidance to U.S. Attorney's offices throughout America, requiring investigators in those offices to share details of their investigations with federal authorities. DOJ will seek to elevate investigations regarding ransomware attacks to the same priority currently given to terrorism-related matters.

Continues on page 22

Oil & Gas Dashboard

Pennsylvania Rig Count



Penn Grade Crude Oil Prices

Natural Gas Futures Closing Prices

Month	Price
July	$3.092
August	3.108
September	3.099
October	3.118
November	3.188
December	3.311
January 2022	3.396
February	3.340
March	3.156
April	2.762
May	2.708
June	2.749

Prices as of June 7

Sources

American Refining Group: www.amref.com/Crude-Prices-New.aspx
Ergon Oil Purchasing: www.ergon.com/crudeoil
Gas futures: quotes.ino.com/exchanges/?r=NYMEX_NG
Baker Hughes rig count: bakerhughesrigcount.gcs-web.com/na-rig-count
Appalachian fixed price moving averages: David Marks, BHE Eastern Energy Field Services

Northeast Pricing Report — June 2021

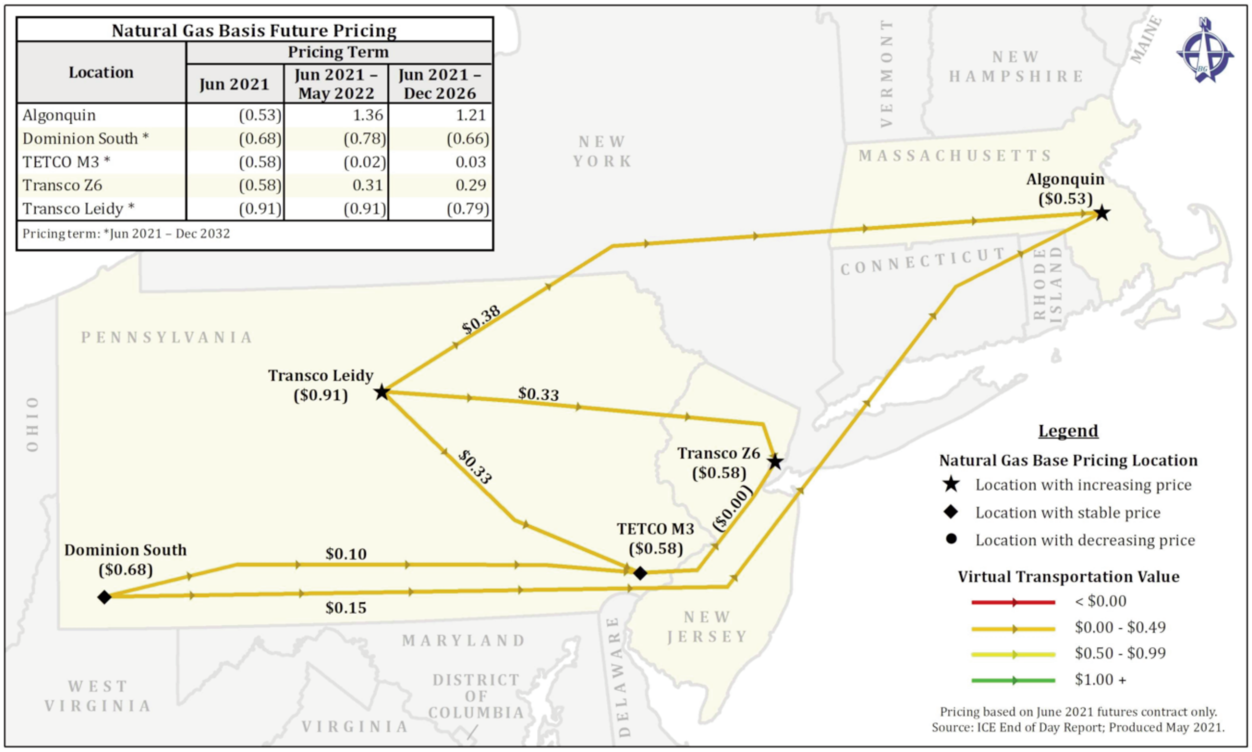
Transportation Value Market Indicator

Provided by Bertison-George, LLC
www.bertison-george.com

Front-month trading for all points increased from May. Transco Leidy had the greatest increase of $0.87 MMBtu. Dominion South saw a minor increase of $0.08 per MMBtu. Dominion South was flat for the one-year rolling term, with Algonquin increasing the most for the one-year rolling term at $0.15 per MMBtu. The long-term trading period experienced little change since May, except for Algonquin. Algonquin increased $0.14 per MMBtu and its long-term value gained $0.20 per MMBtu since April. All other points decreased between $-.01 and $0.01 per MMBtu. Potential for a mid-month spike in demand due to weather may turn the market bullish by July.

All transportation routes were up for June. Transco Leidy to Algonquin rose by $0.38 per MMBtu, which was the largest increase. Transco Leidy to Transco Z6 and to TETCO M3 both increased $0.33 per MMBtu. The Dominion routes to TETCO M3 and Algonquin increased $0.10 and $0.15 per MMBtu, respectively. With the potential for commodity prices to increase mid-month, we would expect transportation values to be on the higher end of summer values.

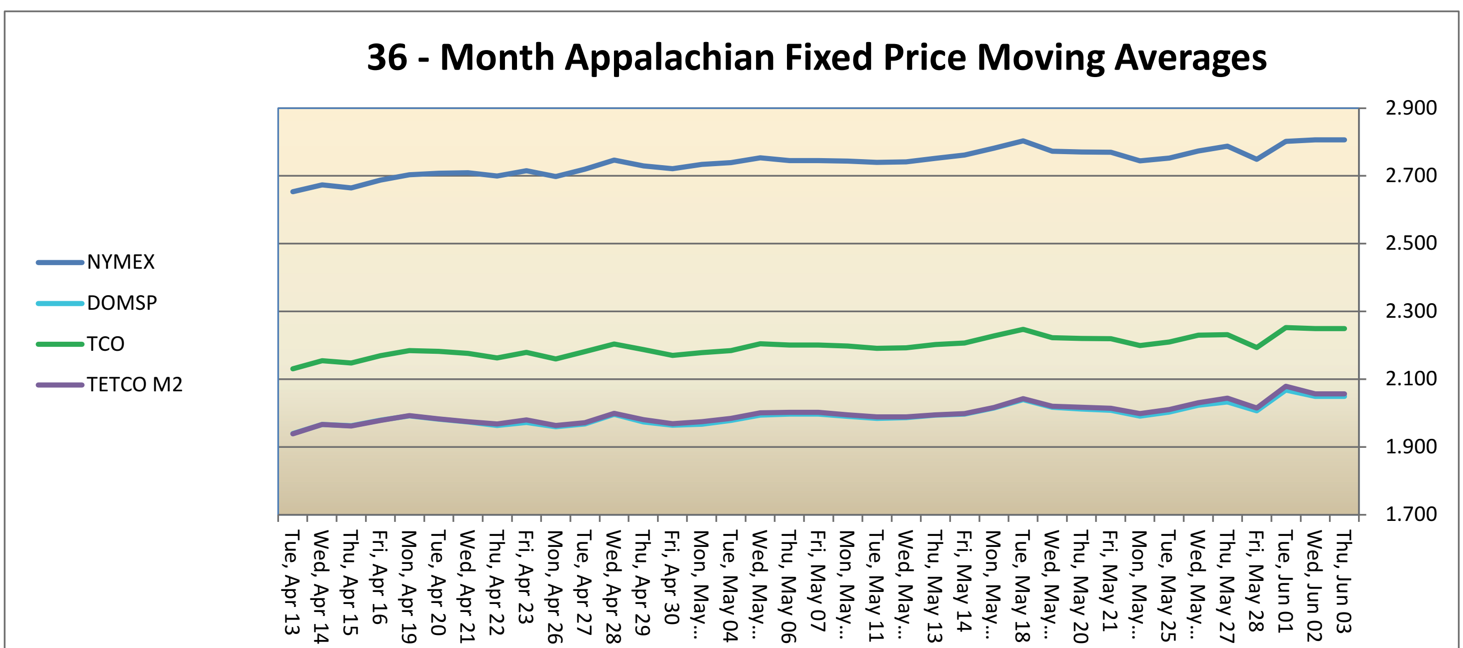
All values are per MMBtu



Natural Gas Basis Future Pricing

Location	Pricing Term		
	Jun 2021	Jun 2021 – May 2022	Jun 2021 – Dec 2026
Algonquin	(0.53)	1.36	1.21
Dominion South *	(0.68)	(0.78)	(0.66)
TETCO M3 *	(0.58)	(0.02)	0.03
Transco Z6	(0.58)	0.31	0.29
Transco Leidy *	(0.91)	(0.91)	(0.79)

Pricing term: *Jun 2021 – Dec 2032



Spud Report: May 2021

The data show below comes from the Department of Environmental Protection. A variety of interactive reports are available by going to the Office of Oil and Gas Management page at www.dep.pa.gov and choosing Report from the menu. The table is sorted by operator and lists the total wells reported as drilled last month. **Spud** is the date drilling began at a well site. The **API number** is the drilling permit number issued to the well operator. An asterisk (*) after the API number indicates a conventional well.

OPERATOR	WELLS	SPUD	API #	COUNTY	MUNICIPALITY
Apex Energy (PA) LLC	2	5/7/21	129-29032	Westmoreland	Hempfield Twp
		5/7/21	129-29033	Westmoreland	Hempfield Twp
Autumn Ridge Energy LLC	1	5/17/21	083-57244*	McKean	Keating Twp
BF Adventures LLC	2	5/14/21	123-48498*	Warren	Mead Twp
		5/20/21	123-48499*	Warren	Mead Twp
Bull Run Resources LLC	1	5/5/21	123-48406*	Warren	Cherry Grove Twp
Cabot Oil & Gas Corp	4	5/12/21	115-22812	Susquehanna	Bridgewater Twp
		5/12/21	115-22813	Susquehanna	Bridgewater Twp
		5/12/21	115-22814	Susquehanna	Bridgewater Twp
		5/12/21	115-22815	Susquehanna	Bridgewater Twp
Cameron Energy Co	1	5/12/21	123-48454*	Warren	Mead Twp
Chesapeake Appalachia LLC	11	5/1/21	015-23679	Bradford	Albany Twp
		5/1/21	015-23681	Bradford	Albany Twp
		5/1/21	015-23682	Bradford	Albany Twp
		5/1/21	015-23680	Bradford	Albany Twp
		5/12/21	115-22835	Susquehanna	Auburn Twp
		5/12/21	115-22836	Susquehanna	Auburn Twp
		5/12/21	115-22834	Susquehanna	Auburn Twp
		5/18/21	131-20633	Wyoming	Meshoppen Twp
		5/18/21	131-20634	Wyoming	Meshoppen Twp
		5/10/21	131-20636	Wyoming	Windham Twp
		5/10/21	131-20635	Wyoming	Windham Twp
MSL Oil & Gas Corp	4	5/14/21	083-57215*	McKean	Lafayette Twp
		5/20/21	083-57212*	McKean	Lafayette Twp
		5/25/21	083-57213*	McKean	Lafayette Twp
		5/28/21	083-57214*	McKean	Lafayette Twp
Range Resources Appalachia	3	5/21/21	125-28903	Washington	Smith Twp
		5/22/21	125-28904	Washington	Smith Twp
		5/24/21	125-28908	Washington	Smith Twp
SWN Prod Co LLC	3	5/19/21	115-22819	Susquehanna	Great Bend Twp
		5/20/21	115-22817	Susquehanna	Great Bend Twp
		5/21/21	115-22818	Susquehanna	Great Bend Twp

	May	April	March	February	January	December
Total wells	**32**	**62**	**67**	**44**	**49**	**24**
Unconventional Gas	23	54	55	41	47	20
Conventional Gas	0	0	0	0	0	0
Oil	9	8	12	3	1	3
Combination Oil/Gas	0	0	0	0	1	1

Ransomware *Continued from page 20*

Important considerations for the private sector

Compliance obligations related to information sharing. As the federal government sharpens its focus on proactively combatting ransomware attacks, businesses must be vigilant in monitoring the evolution of directives, regulations and policies. Particularly, TSA's edict imposes significant reporting obligations on critical pipeline and natural gas facility owners and operators. Likewise, Executive Order 14028 places similar responsibilities on IT service providers contracting with the federal government. Understanding these requirements—or seeking advice of counsel if it is unclear whether the directives apply—is key to ensuring compliance with the law. Compliance, in turn, improves preparedness.

Preparedness. Because ransomware attacks are a threat to all companies, large or small, in addition to following information sharing rules, when applicable, businesses can take discrete steps to prepare for the unfortunate possibility of being the subject of such an attack. First, businesses should plan how they will respond in the event they are targeted by ransomware. Conducting a tabletop exercise, in which essential staff gather to discuss a simulated attack, is a good way to assess preparedness. Discussions can include topics including, but not limited to:

—availability of backups to restore damaged computer networks,

—the time and expertise needed to install the backups and restart operations,

—whether the company is willing to pay a ransom instead to regain access to its systems,

—the maximum ransom it may be willing to pay,

—who is qualified to "negotiate" the ransom, and

—how to handle media inquiries and customer/investor communications.

Involving counsel and board representatives in the tabletop exercise also aids in getting the most robust plan in place.

In addition to the internal dialogue in planning how to respond to a ransomware attack, businesses also should assess the extent to which they would be willing to share ransomware attack information with the government, beyond what may be required by law. In the past, companies have been less willing to share private information of this type; however, as cyber-attacks become more sophisticated and inflict more economic and reputational damage, businesses may find that information sharing mitigates these negative consequences, and may even reduce the likelihood of possible attack.

Finally, when anticipating the possibility of a paralyzing ransomware incident, businesses should evaluate the sufficiency of the resources they have in place to remediate the breach. Considering the scope of the attack and the sheer size of the Colonial Pipeline system, the speed with which Colonial was able to restore operations suggests that it had effectively prepared and had significant resources in place to respond. When considering how to respond to a ransomware attack, businesses also should contemplate:

—applicable insurance coverages and limits,

—technical safeguards on computer networks and systems,

—third-party vendor security issues,

—the advance engagement of a cybersecurity vendor to help restore systems to full operations as quickly as possible, and

—what training employees might need now to minimize the possibility of falling prey to phishing schemes that can introduce ransomware.

Counsel can provide pre-incident guidance and can review insurance policies and third-party vendor agreements. In the event of an attack, the business should contact outside counsel immediately for assistance in investigating and remediating the situation.

Although cyber-attacks pose a real and significant risk, a company can best protect itself through advance planning, preparedness, and by engaging with experienced counsel. ■

Shawn A. Morgan (shawn.morgan@steptoe-johnson.com) leads the Cybersecurity Team at Steptoe & Johnson PLLC.

Calendar of Events

PIOGA events

Event information: pioga.org/events/pioga-events

Cigar Dinner Networking Event
July 15, BURN by Rocky Patel, Pittsburgh

PIOGATech: Safety Topic TBA
July 22, venue TBA

PIOGATech: Water & Waste Management
August 18, venue TBA

24th Annual Divot Diggers Golf Outing
Augst 19, Tam O'Shanter of Pennsylvania, Hermitage

Annual Membership Meeting and Fall Sports Outing
September 15-16, venue TBA

Pins & Pints Networking Event
October 21, venue TBA

PIOGATech: Safety Topic TBA
October 26, venue TBA

Annual Oil & Gas Tax and Accounting Seminar
November 17, venue TBA

Wine Tasting Networking Event
November 18, venue TBA

PIOGATech: Air Quality Compliance
December 16, The Chadwick, Wexford

Mix, Mingle & Jingle Holiday Party
December 16, The Chadwick, Wexford

Other events

Ohio Oil & Gas Association Annual Meeting
June 21-23, Columbus, OH. Info: www.ooga.org

The Great Gathering (GGVII)
July 14, Washington Wild Things Park, Washington
Info: www.greatgathering2021.com; PIOGA member discount

LDC Gas Forum Northeast
July 19-21, Boston. *Register at www.ldcgasforums.com/ne using discount code NEPIOGA125 for $125 off*

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