The PIOGA Press

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Pennsylvania Independent Oil & Gas Association

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EQB approves well bonding petitions for study

By a vote of 16-3, the Environmental Quality Board (EQB) on November 16 accepted a pair of rulemaking petitions asking EQB to greatly increase the cost of oil and gas well bonds for both new and existing conventional and unconventional (shale) wells. The Department of Environmental Protection must study the petitions and report back in 60 days with further recommendations for action on the issues raised by the petitions, or state at the next EQB meeting how much additional time is necessary to complete the report.

The petitions were submitted by five activist organizations—the Sierra Club, Clean Air Council, Earthworks, Mountain Watershed Association, PennFuture and Protect Penn-Trafford. One petition calls for well bonds for conventional oil and gas wells to be increased from $2,500 per well, or a blanket bond of $25,000 for 10 or more wells, to $38,000 per well. The second petition asks that bonds for unconventional wells to be increased to $83,000 per well. Currently, unconventional well bonds are on a tiered system based on well bore length and range from $4,000 to $10,000, with provisions for blanket bonds.

Under both petitions, the higher bonding amounts would apply to any well drilled after April 17, 1985, and would require DEP to report to EQB every two years (or four years, if two is not feasible) on whether the bond amount should be adjusted *(October PIOGA Press, page 1)*.

EQB has the statutory authority to adjust unconventional bonding amounts every two years to reflect the projected costs to the Commonwealth of plugging a well if abandoned by the operator. The petitioners provided data on plugging costs they say justifies the amounts they are demanding. DEP has said its average cost of plugging an abandoned or orphan well is $33,000, but can be as low as $15,000.

Voting against accepting the petitions at EQB's November 16 meeting were state Senator Gene Yaw (R-Lycoming) and Representative Daryl Metcalfe (R-Butler)—respectively, the chairs of the Senate and House Environmental Resources and Energy Committees—and James Welty of the Marcellus Shale Coalition (MSC).

The MSC sent a letter on November 15 to EQB members asking them to reject the petitions. The letter challenged the statutory authority of the board to set bonding amounts for conventional wells, citing language included in the July 2012 Fiscal Code legislation that was part of the FY2012-2013 state budget package.

After analyzing the statutory language cited by the MSC, PIOGA respectfully disagrees with the coalition's

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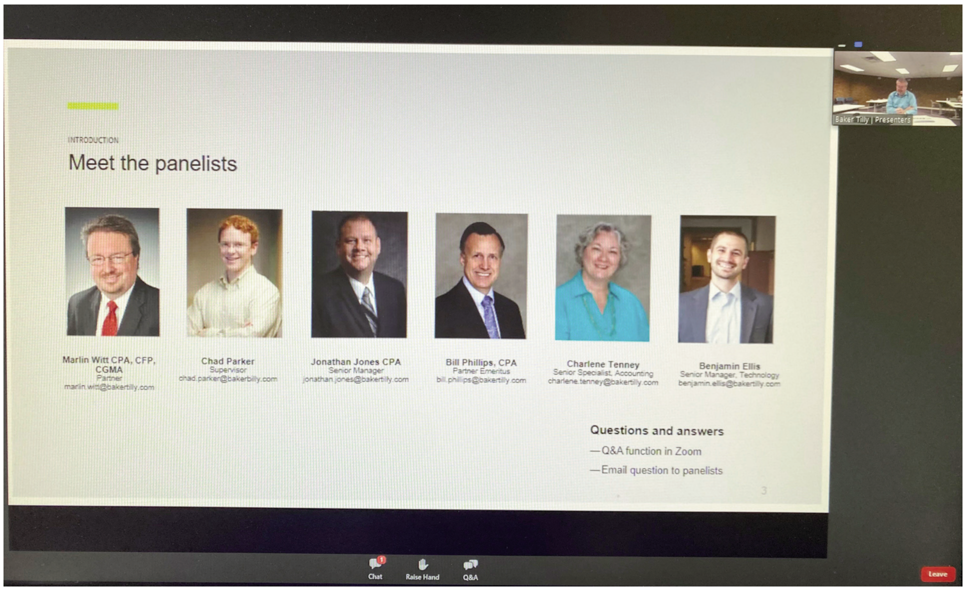
Oil and Natural Gas Tax and Accounting Seminar report



For many years, Arnett Carbis Toothman has presented this annual in-person seminar for PIOGA. In 2020, due to COVID-19 restrictions, a change was made from in-person to a one-day virtual format co-sponsored by three organizations—Gas & Oil Association of West Virginia, Southeastern Ohio Oil & Gas Association and PIOGA—covering tax and accounting issues affecting all three states. This year's seminar, held on November 17, continued with the virtual format. Also, this year Arnett Carbis Toothman became a part of the Baker Tilly group.

The following important and timely topics were on the agenda:

- General Tax Updates for 2021 – Federal and State, including issues now being addressed in Congress, and in the individual states.
- Oil & Gas Industry Tax Updates for 2021
- CARES Act
- Paycheck Protection Program – Forgiveness, Tax and Accounting Considerations
- Purchase/Sale, Valuation, Succession and Estate Planning
- IT Security

PIOGA extends a sincere thank-you to the team from Baker Tilly (formerly Arnett Carbis Toothman) for all their efforts to organize this program and to provide valuable educational material to association members and guests. A special thanks goes to our instructors, Marlin Witt, Partner, CPA, CFP, CGMA; Bill Phillips, CPA, Partner Emeritus; Charlene Tenney, Senior Specialist Account; Chad Parker, Supervisor; Jonathan Jones, CPA, Senior Manager; and Benjamin Ellis, Senior Manager Technology. They presented to a group of over 70 participants who earned CPE and CLE credits after the seven-hour course. ■

What's ahead: 2022 PIOGA events preview

With a new year right around the corner, it's time to start filling in dates for our 2022 events. Below is a preliminary schedule of what we are planning—conferences, trainings and networking events. Watch your email or check the PIOGA Events section at www.pioga.org for more details.

- **January 27** – cigar networking event, BURN by Rocky Patel, Pittsburgh
- **February 24** – PIOGATech: safety topic TBA
- **March 9** – Axes & Ales networking event, Lumberjaxes, Pittsburgh (Millvale)
- **April 6** – Spring Meeting, Rivers Casino, Pittsburgh
- **May 5** – sporting clays networking event
- **May 17** – PIOGATech: environmental topic TBA
- **June 16** – Oilpatch Classic Golf Outing, Wanango Country Club, Reno
- **July 14** – Pins & Pints with Beach Party networking event, Paradise Island Bowl & Beach, Pittsburgh
- **August 3** – PIOGATech – safety topic TBA
- **August 18** – 25th Annual Divot Diggers Golf Outing, Tam O'Shanter Golf Course, Hermitage
- **September 15** – PIOGATech: Water and Waste Management
- **October 19** – Fall Festival and Marcellus to Manufacturing, Seven Springs Mountain Resort, Champion
- **October 20** – Annual Meeting and clay shoot, Seven Springs Mountain Resort, Champion
- **November 16** – Annual Oil & Gas Tax and Accounting Seminar
- **December 15** – PIOGATech: Air Quality
- **December 15** – Mix, Mingle & Jingle Holiday Party

Future of OSHA's vaccination or testing/masking standard remains uncertain

Covered employers should continue preparing for compliance

Authors:

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—
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On November 5, the Occupational Safety and Health Administration (OSHA) published its Emergency Temporary Standard (ETS) requiring private employers with 100 or more employees to establish, implement and enforce a written mandatory vaccination or testing policy. OSHA is authorized to create emergency temporary standards to address "grave dangers" to workers.

The ETS outlines several requirements for covered employers with the goal of limiting exposure and spread of COVID-19 in the workplace. The key requirements include (1) creating a written vaccination policy or a written weekly testing and masking policy; (2) giving employees paid time off to receive the vaccination; and (3) implementing procedures for the removal and return of those employees impacted by COVID-19, among other things. The original compliance deadline for the majority of the requirements was December 6, 2021, with weekly testing of unvaccinated employees to begin January 4, 2022.

Soon after the ETS was published, U.S. Courts of Appeals across the country were flooded with lawsuits challenging its legality. The challenges included a lawsuit filed in the U.S. Court of Appeals for the Fifth Circuit, which ultimately led to the court issuing a stay of the ETS, citing constitutional concerns with its reach. The stay temporarily barred the ETS from going into effect and required OSHA to pause all implementation and enforcement activity.

Because the ETS drew legal challenges from across the country, the rules of multi-circuit litigation required that a lottery be held to determine which court would hear all of the legal challenges. The Sixth Circuit was randomly selected on November 16 to resolve the several lawsuits. While the Sixth Circuit typically hears federal appeals from Ohio, Michigan, Kentucky and Tennessee, under the rules of multi-circuit litigation, the Sixth Circuit's determination will apply nationally and could be reversed only by the U.S. Supreme Court.

Cases before the U.S. Courts of Appeals are typically heard before a panel of three judges. However, a party can petition for an initial *en banc* review, meaning that the full court of 16 active judges would instead review the action. An *en banc* review typically takes place after a three-judge panel first reviews a case, but a majority vote of the active judges could choose to take the initial review to the full court. A Petition for initial hearing *en banc* already has been filed in the Sixth Circuit, and is awaiting a response by OSHA.

As of the end of November, the Sixth Circuit has not disturbed the Fifth Circuit's stay of the ETS. OSHA has filed a motion asking the Sixth Circuit to dissolve the stay. Briefing on that motion was scheduled to be concluded by December 10. It is unlikely that the stay would be lifted at least until that date.

Be prepared

While the litigation continues, employers with more than 100 employees should be ready to comply on short notice should the ETS survive the legal challenges. That means covered employers should draft a compliant vaccination or testing/masking policy, determine the vaccination status of their employees and be ready to enforce a vaccination or testing/masking mandate on short notice. Waiting for clarity from the courts might leave little time to prepare and meet the compliance deadlines, should the ETS survive. ■

Become a 2022 PIOGA Partner

2022 PIOGA PARTNER LEVELS	Yearly Sponsorship Amount	Networking Events (5-7/yr.) Comp Tickets	Golf Events (2/yr.) Comp Tickets	Clay Events (2/yr.) Comp Tickets	PIOGA Meetings (1-2/yr.) Comp Tickets	PIOGATech Seminars (4-6/yr.) Comp Tickets	Advertising Discount*	Logo Recognition Website, Newsletter, Printed Signage
Keystone	$10,000	2	2	2	2	2	30%	Yes
Executive	$7,500	2			2	2	20%	Yes
Meetings	$5,000				4		10%	Yes
Golf	$4,000		4					Yes
Clays	$4,000			4				Yes
Committee	$3,000							Committee meetings, PIOGA Press and eWeekly
Engineer	$2,500							PIOGA meetings, PIOGA Press and eWeekly
Driller	$1,500							PIOGA meetings, PIOGA Press and eWeekly

* PIOGA Press and PIOGA eWeekly only

We are pleased to announce the 2022 PIOGA Partners program. The program was launched four years ago in response to member requests for a "one stop" yearlong event sponsorship option for budgetary purposes. The program also offers unique opportunities—like the Committee Partner—to both support the association's work and make your company stand out all year long.

We also continue to offer traditional event-by-event sponsorships.

The various Partner levels and their benefits are shown in the accompanying table. If you have questions or are ready to sign on now for 2021, contact Debbie Oyler at debbie@pioga.org or 724-933-7306 ext. 22.

And finally, a big thank-you to the members who were 2021 PIOGA Partners. They can be found on page 11 of this issue. We greatly appreciate your support! ■

Don't forget your 2022 PIOGA dues

For most PIOGA members, now is the time to renew your membership for the coming year. If your membership is due by the end of 2021, the main contact for your company received a renewal packet in the mail last month.

Your PIOGA membership has always been a great value, worth far more than the amount you pay in dues. For more than a century, PIOGA and our predecessor associations have prided ourselves on our role of bringing together a widely diverse range of companies, individuals and interests to collaborate for the benefit of the entire industry. As stated on our website's homepage, *Working together, we help members accomplish that which they cannot achieve alone.* What you can be sure of is that PIOGA is working harder than ever to advocate for Pennsylvania's oil and gas industry. Understanding the interconnectedness of all facets of the industry is crucial to the success of our industry. Coming together to work on today's challenges is imperative and effectively communicating to our stakeholders is paramount.

If you would like to know more about how we are working together on behalf of the entire Pennsylvania oil and gas industry, please take a few minutes to read a summary of our activities at pioga.org/publication_file/PIOGA_Overview_and_Accomplishments.pdf. You'll also find suggestions about how increase the value of your membership, such as participating PIOGA committees and taking advantage of member discounts.

Thank you in advance for continuing to be a PIOGA member in 2022 and beyond. Questions about your membership? Contact Debbie Oyler, Director of Member Services, at debbie@pioga.org or 724-933-7306 ext. 22. ■

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State could receive as much as $395 million in federal well-plugging funds

As part of the $1.2-trillion federal infrastructure bill signed into law on November 15, Pennsylvania could be eligible to receive as much as $395 million over the next decade to plug orphan and abandoned oil and gas wells.

Meanwhile, the operating budget for the Department of Environmental Protection's plugging program has never exceeded $3.5 million in a year. In the peak year of this federal funding, DEP's annual plugging budget could reach nearly $80 million. A November 30 article by the *Pittsburgh Post-Gazette* detailed the difficulties DEP faces in scaling up its plugging program, ranging from administering a vastly larger initiative to finding contractors able to do the work.

The law contains several types of grants that will be administered by the federal Department of the Interior and dispersed to states. The clock is already ticking on some of them, the *Post-Gazette* reported. Pennsylvania is anticipated to receive $25 million in an initial grant that requires states to apply for the money within the next six months and spend it within a year of receiving the funds.

DEP has been readying for months for the initial funding round. Inspectors have been in the field verifying the location and condition of about 500 abandoned wells the agency can group into contracts and quickly put out for bid. The department has published guidelines for navigating the state contracting process for companies that have never plugged wells for the government before.

An abandoned gas well in McKean County.

The next stage of funding will be much larger—and trickier to manage, the *Post-Gazette* explained.

Formula grants, based on a state's inventory of orphan wells and its recent oil and gas job losses, are expected to bring about $300 million to Pennsylvania. There is no immediate deadline to begin drawing on that money, so regulators will have time to design strategies for how best to use it. Once they receive the funds, they must spend it within five years.

There are also other types of grants—worth up to $70 million combined—if Pennsylvania dedicates more state money to plugging and takes steps to strengthen its rules to prevent more wells from being abandoned.

At its peak, DEP could be running more than 300 multi-well plugging contracts in a year, according to the agency's projections. Between 2018 and 2020, the department had the funds to execute a total of just nine contracts.

"We're really in uncharted waters," said Seth Pelepko, environmental program manager at DEP's oil and gas bureau.

One way the agency is preparing is by surveying contractors about their ability to plug wells under government contracts, which can be cumbersome. Through November 10, the agency had received responses from almost 80 companies. All of them said they were interested in plugging wells in Pennsylvania, Pelepko said. About half of the companies that responded had plugged wells under a state-issued contract in the past. Two-thirds said they anticipate hiring additional staff if awarded contracts.

"There's going to be a real shortage of contractors, a lack of equipment, a lack of people, and certainly a lack of skill," one contractor told the newspaper.

DEP officials, meanwhile, are hoping the $4.7 billion in new plugging funding nationally might entice large oil and gas companies to take on plugging projects that were too small to be worth their effort before, while also enticing small conventional oil and gas operators to pivot their focus to plugging. ■

PHMSA releases long-awaited final rule for onshore gas gathering lines

Authors:

Keith Coyle

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Chris Kuhman

— Babst Calland —

On November 15, the Pipeline and Hazardous Materials Safety Administration (PHMSA) released a final rule (tinyurl.com/phmsa-gathering-rule) for onshore gas gathering lines. The final rule, which represents the culmination of a decade-long rulemaking process, amends 49 C.F.R. Parts 191 and 192 by establishing new safety standards and reporting requirements for previously unregulated onshore gas gathering lines. Building on PHMSA's existing two-tiered, risk-based regime for regulated onshore gas gathering lines (Type A and Type B), the final rule creates:

• A new category of onshore gas gathering lines that are only subject to incident and annual reporting requirements (Type R); and

• Another new category of regulated onshore gas gathering lines in rural, Class 1 locations that are subject to certain Part 191 reporting and registration requirements and Part 192 safety standards (Type C).

The final rule largely retains PHMSA's existing definitions for onshore gas gathering lines but imposes a 10-mile limitation on the use of the incidental gathering provision. The final rule also creates a process for authorizing the use of composite materials in Type C lines and prescribes compliance deadlines for Type R and Type C lines. Additional information about these requirements is provided below.

Type R lines

The final rule creates a new category of reporting-only regulated gathering lines. These gathering lines, known as Type R lines, include any onshore gas gathering lines in Class 1 or Class 2 locations that do not meet

<table>
<tr><th colspan="4"><u>Type C</u>
Class 1 and operate at ≥20% SMYS for metallic lines or
>125 psig for non-metallic or metallic lines if SMYS unknown</th></tr>
<tr><th>Add'l Criteria</th><th>≥8.625" to 12.75"</th><th>>12.75" to 16"</th><th>>16"</th></tr>
<tr><td><u>No</u> Building Intended for Human Occupancy or Other Impacted Site*</td><td>Reporting and OPID
Design, Construction, Initial Inspection and Testing (New)**
Damage Prevention
Emergency Plans</td><td>Reporting and OPID
Design, Construction, Initial Inspection and Testing (New)
Damage Prevention
Emergency Plans</td><td rowspan="2">Reporting and OPID
Design, Construction, Initial Inspection and Testing (New)**
Corrosion Control
Damage Prevention
Emergency Plans
Line Markers
Public Awareness
Leakage Survey and Repair
Plastic Pipe and Components
MAOP</td></tr>
<tr><td>Building Intended for Human Occupancy or Other Impacted Site*</td><td>Reporting and OPID
Design, Construction, Initial Inspection and Testing (New)**
Corrosion Control
Damage Prevention
Emergency Plans
Line Markers
Public Awareness
Leakage Survey and Repair</td><td>Reporting and OPID
Design, Construction, Initial Inspection and Testing (New)**
Corrosion Control
Damage Prevention
Emergency Plans
Line Markers
Public Awareness
Leakage Survey and Repair
Plastic Pipe and Components
MAOP</td></tr>
</table>

* Determined using Method 1 (Potential Impact Circle) or Method 2 (Class Location Unit)

** Subject to certain exceptions, including for grandfathered pipelines in existence on the effective date of the final rule if a segment shorter than 40 feet in length is replaced, relocated, or otherwise changed

*** Alternative MAOP method for grandfathered pipelines in existence on the effective date of final rule if operator cannot determine the highest actual operating pressure experienced during 5-year window using notification and no-objection process the definition of a Type A, Type B, or Type C line. Operators of Type R lines must comply with the certain incident and annual reporting requirements in Part 191. No other requirements in Part 191 apply to Type R lines.

Type C lines

The final rule creates a new category of regulated onshore gas gathering lines. These gathering lines, known as Type C lines, include onshore gas gathering lines in rural, Class 1 locations with an outside diameter greater than or equal to 8.625 inches and a maximum allowable operating pressure (MAOP) that produces a hoop stress of 20 percent or more of specified minimum yield strength (SMYS) for metallic lines, or more than 125 psig for non-metallic lines or metallic lines if the stress level is unknown.

Operators of Type C lines are subject to the same Part 191 requirements as Type A and Type B lines and must comply with certain Part 192 requirements for gas transmission lines, subject to the non-retroactivity provision for design, construction, initial inspection and testing, as well as other exceptions and limitations that vary based on the outside diameter of the pipeline and whether there are any buildings intended for human occupancy or other impacted sites within the potential impact circle or class location unit for a segment. The final rule also provides additional exceptions from certain requirements, including for grandfathered pipelines if a segment 40 feet or shorter in length is replaced, relocated, or otherwise changed. A table illustrating the applicable requirements is found on page 7.

In addition to prescribing these new requirements, the final rule authorizes the use of composite materials in Type C lines if the operator provides PHMSA with a notification containing certain information at least 90 days prior to installation or replacement and receives a no-objection letter or no response from PHMSA within 90 days.

Deadlines

The effective date of the final rule is May 16, 2022. Operators of Type R and Type C lines must comply with the applicable requirements in Part 191 starting on May 16, 2022, although the first annual report is not due until March 15, 2023. Operators must also comply with the requirement to document the methodology used in determining the beginning and endpoints of onshore gas gathering by November 6, 2022, and operators of Type C lines must comply with the applicable requirements in Part 192 by May 16, 2023. Operators may request an alternative to these six- and 12-month compliance deadlines by providing PHMSA with a notification containing certain information at least 90 days in advance and receiving a no-objection letter or no response from PHMSA within 90 days.

Other considerations

Along with the final rule, PHMSA published its final regulatory impact analysis, which estimated that the final rule will regulate approximately 426,000 miles of gas gathering lines, of which 91,000 miles will be subject to new safety requirements. PHMSA also estimated that the annualized cost to implement the final rule is approximately $13.7 million. PHMSA determined that these costs are outweighed by the benefits of the rule, which include avoided injuries, evacuations, commodity loss, improved reporting processes and a reduction in the number of pipeline incidents. Notably, PHMSA did not address comments submitted by industry raising concerns regarding the costs of complying with the new regulations, but instead reiterated its findings from the preliminary regulatory impact analysis.

Administrative petitions for reconsideration must be filed with PHMSA within 30 days of the final rule's publication in the *Federal Register*. Petitions for judicial review must be filed within 89 days of the final rule's publication in the *Federal Register* or, if an administrative petition for reconsideration is filed, within 89 days of PHMSA's decision on the petition. ■

PIOGA's online Career Center

Did you know that our website offers the ability for companies to post open positions? To help in your employee recruitment efforts, go to pioga.org and click on Careers.

Regulators seek to suspend rule on LNG by rail

Federal regulators have proposed suspending a Trump administration rule that would have allowed railroads to haul liquefied natural gas while they take a closer look at the potential safety risks.

The rule, which was backed by both the natural gas and freight rail industries, had already been on hold because several environmental groups and 14 states filed lawsuits challenging it.

The federal Pipelines and Hazardous Materials Safety Administration said the uncertainty about the rule also kept companies from investing in the specialized rail tank cars that were required, so railroads haven't actually handled any shipments of the flammable and odorless liquid known as LNG since the rule was issued last summer.

The rule would have required enhancements—including a thicker outer tank made of steel with a greater puncture resistance—to the approved tank car design that, for decades, has been approved for shipments of other flammable cryogenic materials, such as liquid ethylene and liquid ethane.

But in their lawsuit, activist groups argued that those new railcars, which have yet to be built, were untested and might not withstand high-speed impacts, increasing the threat of an explosive train derailment along rail lines that cross directly through the heart of most cities.

"We don't believe that LNG by rail should have ever been authorized in the first place, so we look forward to the authorization being suspended," said Bradley Marshall, a senior attorney with Earthjustice, which filed the lawsuit on behalf of the activist groups.

A spokesman for California Attorney General Rob Bonta also praised the Biden administration's decision to suspend the rule. Bonta's office said he would continue the challenge to the rule started by his predecessor because he believes "this rule is unlawful" and regulators didn't properly evaluate all the environmental risks.

Besides California, the other states that challenged the rule included Delaware, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. Washington D.C. was also part of the lawsuit.

The lawsuits have all been put on hold while federal regulators review the rule, which could take until the summer of 2024.

Before this rule was issued last summer, federal hazardous materials regulations allowed shipments of LNG by truck, but not by rail, except with a special permit.

The move to abandon the rule allowing LNG shipments by rail comes as natural gas prices and exports are surging in the United States. And ongoing court and regulatory battles have slowed development of pipelines that would help deliver the nation's world-leading natural gas production to markets.

The long-term growth in LNG exports has continued to set records, according to the latest federal figures. U.S. LNG exports averaged 9.6 billion cubic feet per day during the first six months of this year as the economy continued to recover from the coronavirus pandemic.

A spokeswoman for the Association of American Railroads trade group defended the rail industry's safety track record and said railroads would be able to handle LNG shipments if given the opportunity.

"Railroads continue to be the safest way to move hazardous materials over land with 99.99% of all hazmat shipment arriving at their destination without incident," said Jessica Kahanek with the railroad group. "The rail industry remains confident that DOT's ongoing research will affirm that with the right precautions rail is a responsible transportation solution for moving LNG if their customers request it."

One of the industrial backers of the idea of shipping LNG by rail included a proposed project from a subsidiary of New Fortress Energy that wanted to use rail to haul LNG from northern Pennsylvania's Marcellus Shale natural gas fields to a yet-to-be-built storage terminal at a former explosives plant in New Jersey, along the Delaware River near Philadelphia.

The Trump administration had issued a special permit to that project in 2019. If it were built, most of that LNG was expected to be exported to foreign markets for electricity production.

—Associated Press

Methane tax and implementation issues

By Joe Baran, Principle
Bertison-George, LLC

Saving the conventional oil and gas industry has come down to how the proposed federal methane tax and potential implementation grants will be managed. The viability of the industry segment hangs in the balance. Not only are there significant cost increases, but the likelihood of this segment benefiting in the grant distribution is slim.

The U.S. Geological Survey reviewed the Clinton formation in the Appalachian area. According to the study, a Clinton well could produce between 98,000 and 450,000 MMcf, and on average produce 116 MMcfG of natural gas[1]. A report from professors at Cornell indicated that methane emissions from conventional wells ranged from 0.31 percent to 2.4 percent[2]. In addition, a June 2018 article in Sciencemag.org, estimated that the average CH4 emissions from oil and gas production was 7.6 percent[3]. Assuming the life of a well to be 25 years, the amount of escaped methane would equate to 2-591 methane tons. Below is a chart representing the results of the proposed methane tax. The total tax columns represent the total tax over the life of the well if the tax rate were to stay at specific annual amounts. Being that the proposed tax structure has a tiered approach, the annual tax columns are the tax quantity for those specific years.

Clinton Well Example:

		2023 @$900/Tn			2024 @1,200/Tn			2025 @ $1,500/Tn		
EUR (mcf)	Emitted %	Total Tax	Annual Tax	Total Avg. Annual Tax Per Mcf	Total Tax	Annual Tax	Total Avg. Annual Tax Per Mcf	Total Tax	Annual Tax	Total Avg. Annual Tax Per Mcf
98,000	0.31%	$ 1,721	$ 69	$ 0.02	$ 2,295	$ 92	$ 0.02	$ 2,868	$ 115	$ 0.03
116,000	2.40%	$ 40,739	$ 1,630	$ 0.35	$ 54,319	$ 2,173	$ 0.47	$ 67,899	$ 2,716	$ 0.59
450,000	2.40%	$ 158,041	$ 6,322	$ 0.35	$ 210,722	$ 8,429	$ 0.47	$ 263,402	$ 10,536	$ 0.59
450,000	7.60%	$ 531,593	$ 21,264	$ 1.18	$ 708,791	$ 28,352	$ 1.58	$ 885,988	$ 35,440	$ 1.97

Assumptions: Methane Content = 75%; Methane Wght 47.3 Lbs; 2,000 lbs/ton

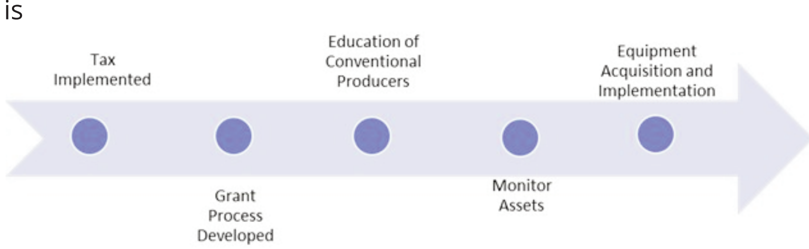
Based on the latest proposed methane tax structure, Bertison-George is estimating that the total average annual tax rate will range between $0.02 and $1.97 per MMBtu.

Some would point out that the proposed implementation grants totaling $4.75 billion[4] would be enough to provide conventional producers the capital necessary to prepare for the methane tax in 2023. The issue with that is that money will likely be gone before most, if not all, conventional producers will receive such funds. The federal government does not have a positive track record of providing aid where it is needed.

This chart shows the largest Paycheck Protection Program loan amounts going to companies with a market cap of $151 million to $405 million.

Large producers who spent their own capital and are already under the 0.2 percent methane intensity limit will simply request funding for new projects which will quickly eclipse the $4.75 billion.

The implementation timeline needs to be adjusted as well. There will be many steps in the process if it is to be successful for conventional producers.



There needs to be an educational process and reservation of the grants for conventional producers. In many states, small producers operate fewer than 100 wells. They do not have staff in Washington, D.C., or even state representation.

However, there are measures that can be

1 Characteristics of discrete and basin-centered parts of the Lower Silurian regional oil and gas accumulation, Appalachian basin: Preliminary results from a data set of 25 oil and gas fields Robert T. Ryder 1 Open-File Report 98-216

2 Methane and the greenhouse-gas footprint of natural gas from shale formations A letter Robert W. Howarth ·Renee Santoro · Anthony Ingraffea

3 Sciencemag.org Jun21, 2018

4 Reconciliation_rcp November 3, 2021, Sec 137(2)

included for the grant process to be fair and equitable.

1. Develop an incentive based implementation program.
   a. Develop EPA workshops for education.
   b. Require documented implementation plans.
   c. Allow for voluntary/virtual/self-inspections.
   d. Extend implementation, review, and certification time-periods.
2. Reserve a specific value of the grants for small business owners.

For this tax to have any chance to be impactful and not kill a segment of the industry, a reasonable process needs to be developed for its implementation. ■

A great holiday gift idea!

Only a few of the 100 custom Case knives PIOGA commissioned for our Centennial celebration are remaining. They make a great gift for the industry colleague or petroliana aficionado on your holiday shopping list—or even as a gift to yourself! The cost is just $75 for this collector's piece. Contact Deana McMahan at deana@pioga.org to place your order today!

One last thank-you to our 2021 PIOGA Partners

Keystone Partners

American Refining Group, Inc. — Refine everything.

ERGON — a company that works

Executive Partners

Kriebel Companies — Developing Resources, Sharing Successes

Penneco Environmental Solutions, LLC

Meetings Partners

Babst Calland — Attorneys at Law

CEC — Civil & Environmental Consultants, Inc.

Snyder Brothers Inc. — Kittanning, PA

Steptoe & Johnson PLLC

Golf Partners

Billman Geologic

Energy Transfer

Committee Partner

Moody and Associates, Inc. — Groundwater and Environmental Professionals Since 1891

Driller Partners

Aqua-Clear

ShalePower — Pennsylvania, Ohio, West Virginia Economic Renaissance

UGI Energy Services

Engineer Partners

Gmerek Government Relations, Inc.

Greylock Energy

Pennsylvania Independent Oil & Gas Association

JUST THE FACTS

Proposed methane tax would mean skyrocketing energy costs

One of the most ill-advised parts of the Congressional Democrats' Build Back Better budget reconciliation legislation is a proposed tax on methane emissions from natural gas and petroleum production. The December installment of our Just The Facts series explains that the tax would start at $1,800 per ton of emissions in 2023 with the potential direct cost of the tax to the economy being as high as $14.4 billion, increasing 5 percent above inflation in future years.

The methane tax also would create new reporting thresholds, adding to the costs of oil and gas businesses. It would direct the Environmental Protection Agency to lower the emissions threshold for companies to report emissions from the current 25,000 metric tons of carbon dioxide equivalent per year to 10,000 metric tons per year, covering many smaller operators for the first time.

While the fate of this tax is uncertain as Congress negotiates over the reconciliation bill, it likely will not represent an end to punitive tax proposals aimed at the oil and gas industry—requiring the attention of every company involved in energy production.

In addition to our industry's ongoing aggressive methane reduction efforts, a federal rulemaking initiated in November could establish a more predictable path to limit methane emissions in the future—in addition to our industry's ongoing aggressive efforts to capture and sell this product, not allow it to escape into the air.

The type of tax envisioned by some members of Congress, on the other hand, would unnecessarily increase the cost of energy production in the United States and burden businesses and consumers with higher utility bills. PIOGA will continue to fight additional taxes on our industry and we encourage members to remain engaged on this important issue. Visit the Latest News and Blog section of www.pioga.org to read more and download a version you can share with others.

Safety Committee Corner

Cold weather injury prevention

By Wayne Vanderhoof, RJR Safety Inc.
Co-chair, PIOGA Safety Committee

Two common injuries that may occur while working outdoors during late fall, winter and early spring months are hypothermia and frostbite. Preventing exposure to cold weather and reducing the potential for these cold-weather injuries start with understanding the injuries and then prevention methods.

It is very important to always contact an immediate supervisor and persons trained in first-aid to assist in the caring of a person with any type of cold injury.

The first cold weather injury is **hypothermia**, when the body loses heat faster than it can produce heat, causing the core body temperature to fall below 95 degrees Fahrenheit. Hypothermia can result from exposure to cold air or water temperatures, or both. The air or water temperature does not have to be below freezing for hypothermia to occur. Exposure for extended periods to cold, wet, breezy or windy conditions and wearing damp or wet clothing increase risk for hypothermia at temperatures above 32 degrees, such as 40 and even 50 degrees.

Signs and symptoms of hypothermia to look for in yourself and coworkers include being disoriented or confused, having a “glassy” stare, uncoordinated movements, slurred speech, light-headedness, fatigue, slow movements and responses, and profuse sweating (yes, sweating). Initially, the person may shiver, but as the hypothermia progresses the shivering may stop. This is a sign that the person’s condition is worsening and immediate medical care is needed.

First-aid for hypothermia includes gradually rewarming the person by getting him or her to a warm place, removing damp or wet clothing and covering with dry clothing or blanket, as well as covering the hands and head to conserve heat. You may blow warm air in the direction of the person though not directly on the skin. If the person is conscious and able to swallow, give small sips of warm non-caffeinated liquids such as broth or warm water. Monitor the person for improvement and warming. If the person does not seem to improve or the condition worsens to a slowing of breathing or a decrease in the level of consciousness, contact emergency services immediately.

The other cold weather injury is **frostbite**, which is when the fluid in the skin tissue cells freeze because of extended exposure to freezing or below-freezing temperatures. The most common areas affected include ears, nose, fingers, toes and exposed areas of skin. Frostbite can lead, if untreated, to loss of the affected areas.

Signs and symptoms of frostbite include the affected area being numb and the skin is cold to the touch and appears waxy, with the skin color being white, yellow, blue or red. In severe cases, there may be blisters and the skin may turn black.

When providing **first-aid for frostbite** for mild cases, handle the affected area gently. Never rub the frostbitten area, as this can cause additional damage to the tissue. Move the person into a warm area, allowing warm (not hot) air to blow onto the affected area. Using skin-to-skin contact (for example, cupping the affected area in your hands) may be sufficient to rewarm the frostbitten body part. For more significant frostbite, you can rewarm the affected body part by soaking it in warm water until normal color and warmth returns (about 20 to 30 minutes). The water temperature should not be more than 100-105 degrees F. If you do not have a thermometer, test the water with your hand. It should feel warm (about body temperature), not hot. In severe cases where blisters appear, do not break them. You should loosely bandage the area with a dry, sterile bandage. If the fingers or toes were affected, place cotton or gauze between them before bandaging the area. The person with blisters caused by frostbite needs more medical attention than first-aid.

Prevention of cold weather injuries, specifically hypothermia and frostbite, include dressing for being in cold weather for extended periods. Dressing in layers can help to protect you from exposure to cold temperatures.

The first layer, called the base layer, is next to your skin. The base layer helps to regulate body temperature by wicking perspiration away from the skin, which is important because if perspiration gets trapped inside your clothes, you can become chilled rapidly, which can lead to hypothermia. Fabrics best at wicking sweat away from the skin are silk, merino wool and certain synthetics. Cotton is not a good choice because it traps moisture, rather than wicking it away.

The job of the middle layer is insulation. This layer keeps you warm; it helps you retain heat by trapping air close to your body. Natural fibers such as wool and goose down are excellent insulators. So is synthetic fleece. Vests, jackets and tights are examples of clothing that can be worn for insulation.

The shell or outer layer protects you from wind, rain or snow. For cold weather, the shell layer should be both waterproof and “breathable.” This will keep wind and water from getting inside of the other two layers while allowing perspiration to evaporate. The shell also should be roomy enough to fit easily over the other layers without restricting movement.

In addition to layering your clothes, wear items to cover other areas to allow you to stay warm in cold weather. These items include a hat that also covers your ears, a knit mask that covers your face and mouth, insulated gloves (though mittens keep your hands warmer), insulated socks and water-resistant boots.

To review, there are two common cold weather injuries that may occur while working outdoors during late fall, winter, and early spring: hypothermia and frostbite. Preventing exposure to cold weather and reducing the potential for these cold-weather injuries start with understanding the injuries and how to prevent them with the correct layering of clothing and minimizing exposed skin by covering everything. It is very important to always contact an immediate supervisor and persons trained in first-aid to assist in the caring of a person with any type of cold injury. It is equally important for us to watch out for each other for the symptoms of cold weather injuries. We will notice a cold weather injury in our coworker before we recognize it in ourselves. ■

This article was written as a toolbox or tailgate talk. It was compiled from materials published by the American Red Cross.

PIOGA Member News

CNX receives ESG Top Performer award

CNX Resources has been named a 2021 Energy ESG Top Performer in the Public E&P category by Hart Energy. The awards recognize innovations in reducing environmental impact, social efforts and community contributions in the oil and gas industry.

CNX received the award, in part, for the following environmental and societal accomplishments in 2020:

- Completing water line infrastructure that recycles 99 percent of produced water in its core operational area while eliminating more than 65,000 water trucks from the road annually.
- Experiencing zero hydrocarbon spills in 2020.
- Achieving net negative Scope 1 and 2 emissions.
- Donating $70,000 to fight food insecurity and close the technology gap for families affected by the COVID-19 pandemic.
- Donating more than 200 employee volunteer hours to help nonprofit organizations meet the sudden surge in demand.
- Raising more than $180,000 for the Washington County Community Foundation through a land auction.

Nahley Joins Steptoe & Johnson Energy Department

Steptoe & Johnson announces that Christopher Nahley has joined the firm's Energy Department as a member. Nahley practices mineral title and energy real estate law from the firm's office in Charleston, West Virginia. He has many years of experience serving the energy industry as an attorney and independent landman.

As a native of Alabama, Nahley earned his law degree from the Thomas Goode Jones School of Law in Montgomery and his bachelor's degree from Auburn University. ■

New PIOGA members — *welcome!*

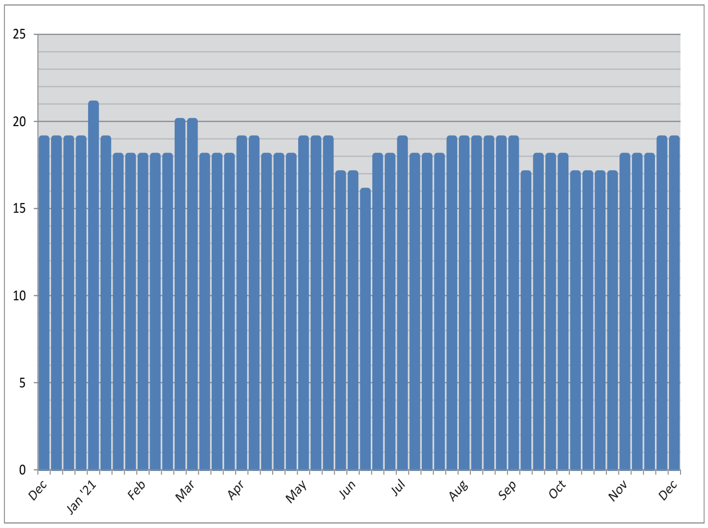
Barlar Management Co., LLC
338 Harris Hill Road, Ste. 102, Williamsville, NY 14221
716-932-6480
Allies & Providers—oil & gas exploration

Elder Oil & Gas
116 Elder Road, Parker, PA 16049
814-358-2590
Producer

Uprise Energy Distribution
PO Box 142, Spring House, PA 19477
215-519-8693
Allies & Providers—distribution of the Uprise Energy mobile wind turbine

Oil & Gas Dashboard

Pennsylvania Rig Count



Penn Grade Crude Oil Prices

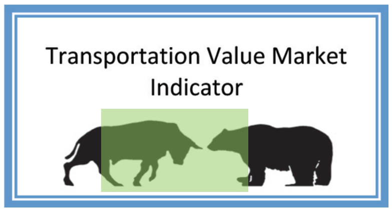
Natural Gas Futures Closing Prices

Month	Price
January 2022	$3.715
February	3.685
March	3.596
April	3.508
May	3.512
June	3.559
July	3.615
August	3.630
September	3.614
October	3.650
November	3.752
December	3.946

Prices as of December 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 — December 2021



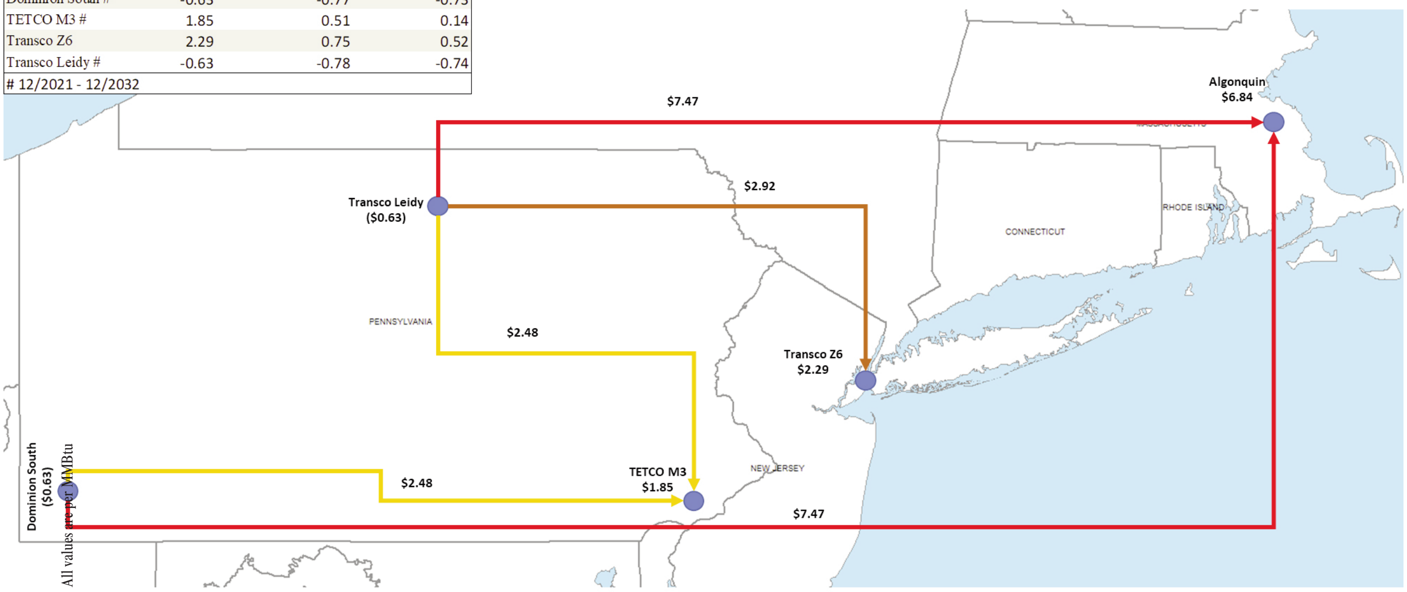
Provided by Bertison-George, LLC
www.bertison-george.com

New England has already jumped into winter with both feet. Algonquin has increased $5.01 per MMBtu for front month trading. Transco Z6 and TETCO M3 each had significant increases of $.261 per MMBtu. Even Dominion South and Transco Leidy increased $0.12 and $0.16 per MMBtu respectively. However, the long-term outlook is being well supplied. Algonquin's one-year term decreased $0.59 per MMBtu, and all other basis locations decreased between $0.04 and $0.06 per MMBtu. In fact, only TETCO M3's one-year term increased by $0.21 per MMBtu. TETCO M3's full trading term increased $0.38 per MMBtu, which was the only index point to do so. Algonquin's full trading term decreased the most by $0.20 per MMBtu. All other basis locations decreased between $0.01 and $0.06 per MMBtu for the full term.

Transportation values increased significantly again for another month. Dominion South and Transco Leidy to Algonquin increased $4.89 and $4.85 per MMBtu respectively. Transco Leidy to Transco Z6 increased $2.45 per MMBtu. Dominion South to TETCO M3 increased $2.05 per MMBtu. Lastly, Transco Leidy to TETCO M3 increased $2.01 per MMBtu. TETCO M3 to Transco Z6 saw the lowest increase of $0.44 per MMBtu.

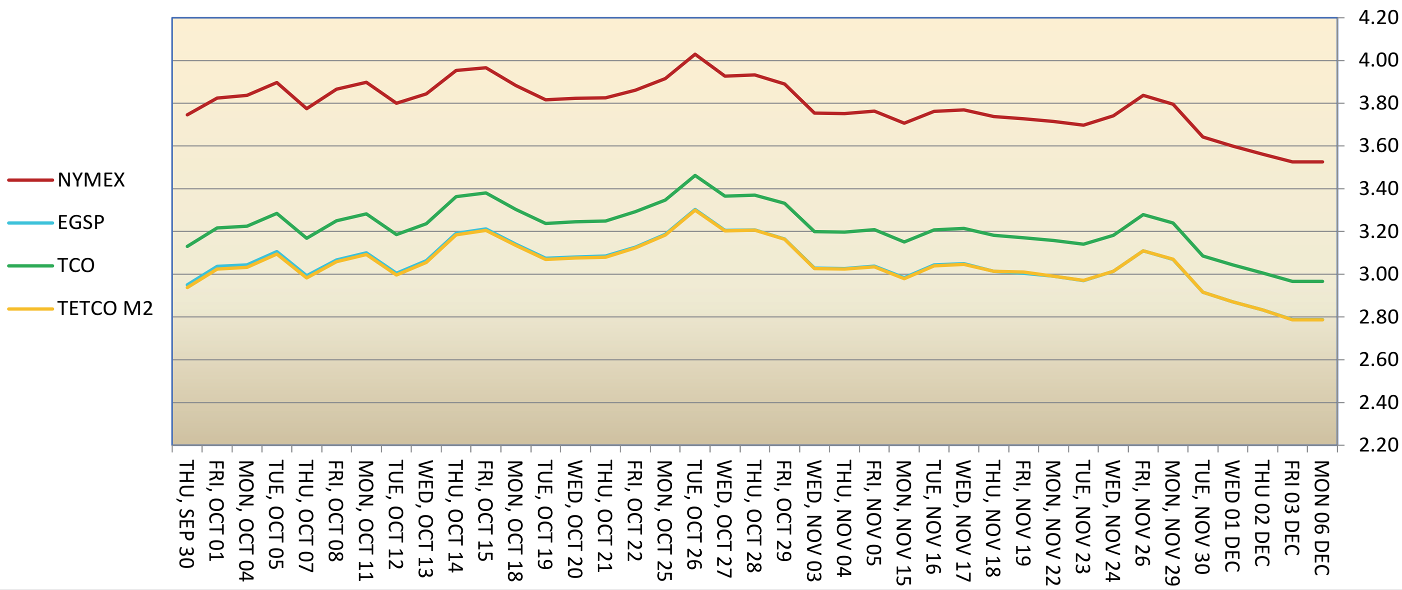
Natural Gas Basis Future Pricing

	Pricing Term		
Location	12/2021	12/2021-11/2022	12/2021-12/2026
Algonquin	6.84	3.51	2.15
Dominion South #	-0.63	-0.77	-0.73
TETCO M3 #	1.85	0.51	0.14
Transco Z6	2.29	0.75	0.52
Transco Leidy #	-0.63	-0.78	-0.74
# 12/2021 - 12/2032			



Pricing as of December 2021 Future contract only; Source ICE End of Day Report

36-Month Appalachian Fixed Price Moving Averages



Spud Report: November 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
Cameron Energy Co	2	11/16/21	123-48507*	Warren	Sheffield Twp
		11/26/21	123-48508*	Warren	Sheffield Twp
Chesapeake Appalachia LLC	7	11/16/21	015-23689	Bradford	Wyalusing Twp
		11/6/21	113-20438	Sullivan	Cherry Twp
		11/6/21	113-20437	Sullivan	Cherry Twp
		11/18/21	131-20640	Wyoming	Meshoppen Twp
		11/18/21	131-20639	Wyoming	Meshoppen Twp
		11/19/21	131-20637	Wyoming	Meshoppen Twp
		11/19/21	131-20638	Wyoming	Meshoppen Twp
Chief Oil & Gas LLC	4	11/10/21	113-20436	Sullivan	Elkland Twp
		11/10/21	113-20433	Sullivan	Elkland Twp
		11/10/21	113-20434	Sullivan	Elkland Twp
		11/10/21	113-20435	Sullivan	Elkland Twp
CNX Gas Co LLC	7	11/14/21	059-27877	Greene	Center Twp
		11/14/21	059-27876	Greene	Center Twp
		11/17/21	059-28158	Greene	Richhill Twp
		11/17/21	059-28011	Greene	Richhill Twp
		11/17/21	059-28157	Greene	Richhill Twp
		11/17/21	059-28156	Greene	Richhill Twp
		11/17/21	059-28155	Greene	Richhill Twp
Coterra Energy Inc	8	11/11/21	115-22856	Susquehanna	Gibson Twp
		11/11/21	115-22857	Susquehanna	Gibson Twp
		11/11/21	115-22859	Susquehanna	Gibson Twp
		11/11/21	115-22858	Susquehanna	Gibson Twp
		11/19/21	115-22903	Susquehanna	Rush Twp
		11/19/21	115-22904	Susquehanna	Rush Twp
		11/19/21	115-22905	Susquehanna	Rush Twp
		11/19/21	115-22906	Susquehanna	Rush Twp
EQT ARO LLC	7	11/18/21	081-21907	Lycoming	Cascade Twp
		11/18/21	081-21908	Lycoming	Cascade Twp
		11/18/21	081-21897	Lycoming	Cascade Twp
		11/18/21	081-21898	Lycoming	Cascade Twp
		11/18/21	081-21899	Lycoming	Cascade Twp
		11/18/21	081-21909	Lycoming	Cascade Twp
		11/18/21	081-21906	Lycoming	Cascade Twp
PennEnergy Resources LLC	7	11/10/21	019-22880	Butler	Buffalo Twp
		11/10/21	019-22888	Butler	Buffalo Twp
		11/11/21	019-22889	Butler	Buffalo Twp
		11/11/21	019-22890	Butler	Buffalo Twp
		11/12/21	019-22891	Butler	Buffalo Twp
		11/12/21	019-22892	Butler	Buffalo Twp
		11/13/21	019-22893	Butler	Buffalo Twp
Repsol Oil & Gas USA LLC	6	11/29/21	117-22147	Tioga	Ward Twp
		11/29/21	117-22148	Tioga	Ward Twp
		11/29/21	117-22149	Tioga	Ward Twp
		11/29/21	117-22150	Tioga	Ward Twp
		11/29/21	117-22151	Tioga	Ward Twp
		11/29/21	117-22152	Tioga	Ward Twp
Seneca Resources Co LLC	4	11/10/21	023-20287	Cameron	Shippen Twp
		11/10/21	023-20288	Cameron	Shippen Twp
		11/10/21	023-20289	Cameron	Shippen Twp
		11/10/21	023-20290	Cameron	Shippen Twp
Snyder Bros Inc	5	11/2/21	005-31403	Armstrong	Kittanning Twp
		11/2/21	005-31404	Armstrong	Kittanning Twp
		11/3/21	005-31405	Armstrong	Kittanning Twp
		11/3/21	005-31406	Armstrong	Kittanning Twp
		11/4/21	005-31407	Armstrong	Kittanning Twp
SWN Prod Co LLC	3	11/9/21	115-22892	Susquehanna	Jackson Twp
		11/10/21	115-22894	Susquehanna	Jackson Twp
		11/11/21	115-22893	Susquehanna	Jackson Twp
Wilmoth Interests Inc	2	11/16/21	123-48542*	Warren	Mead Twp
		11/23/21	123-48541*	Warren	Sheffield Twp

	November	October	September	August	July	June
Total wells	**62**	**76**	**59**	**52**	**53**	**56**
Unconventional Gas	58	62	43	35	37	43
Conventional Gas	0	0	0	1	0	0
Oil	4	7	6	14	14	13
Combination Oil/Gas	0	7	10	2	2	0

Well bonding petitions *Continued from page 1*

conclusion regarding the effect of the Fiscal Code amendment on the EQB's authority to consider the petition to increase conventional well bonding, and believes that the amendment removes the two-year limitation applicable to unconventional well bonding adjustments. However, we wholeheartedly agree with the MSC's reasons for rejecting the unconventional well bonding increase request, as well as that the conventional well bonding increase request should be rejected for the same reasons—which we will show in formal comments at the appropriate time.

PIOGA contends that the bonding proposals would financially harm operators, with the potential to put some out of business; that the petitions rely on less-than-accurate data; that full cost bonding for conventional wells that are likely to continue to produce for 30-60 years would do nothing to solve the Commonwealth's existing orphan and abandoned well problem.

Among other points about the unconventional well bond petition raised in the MSC letter:

• It is a misrepresentation of the statutory authority and intent of Act 13 of 2012 that bond amounts must be equal to the total financial cost of plugging a well. Pennsylvania law makes it clear that a bond is intended to represent a reasonable proportion of the cost to plug and reclaim a well that, combined with an operator's other assets and in consideration with DEP's permitting and compliance authority, will ensure a well is properly plugged at the end of its useful life.

• The EQB has the authority to adjust bond amounts for unconventional wells, but not the authority to abolish the tiered bonding system established by Act 13 nor to eliminate bonding caps or blanket bonds.

• DEP's authority to retroactively raise bond amounts on existing wells is questionable. Retroactively raising bond amounts on existing wells could cost operators in excess of $500 million.

As a side note, DEP officials explained at the most recent DEP/industry quarterly meeting that there are three conditions a rulemaking petition must meet to be approved for DEP review—the petition is complete as defined in Chapter 23, the petition requests an action that can be taken by EQB; and the requested action does not conflict with federal law. DEP emphasized that the well bonding petitions meet all three tests. ■

Calendar of Events

PIOGA events

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

PIOGATech: Air Quality Technical Seminar
December 16, The Chadwick, Wexford

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

Cigar networking event
January 27, BURN by Rocky Patel, Pittsburgh

PIOGATech: safety topic TBA
February 24, venue TBA

Axes & Ales networking event
March 9, Lumberjaxes, Pittsburgh

Spring Meeting
April 6, Rivers Casino, Pittsburgh

Sporting clays networking event
May 5, venue TBA

PIOGATech: environmental topic TBA
May 17, venue TBA

Oil Patch Classic Golf Outing
June 16, Wanango Country Club, Reno

Pins & Pints with Beach Party networking event
July 14, Paradise Island Bowl & Beach, Pittsburgh

PIOGATech: safety topic TBA
August 3, venue TBA

25th Annual Divot Diggers Golf Outing
August 18, Tam O'Shanter Golf Course, Hermitage

PIOGATech: Water and Waste Management
September 15, Seven Springs Mountain Resort, Champion

Fall Festival and Marcellus to Manufacturing
October 19, Seven Springs Mountain Resort, Champion

Annual Meeting and clay shoot
October 20, venue TBA

Annual Oil & Gas Tax and Accounting Seminar
November 16, venue TBA

PIOGATech: Air Quality
December 15, venue TBA

Mix, Mingle & Jingle Holiday Party
December 15, venue TBA

Other events

GO-WV Winter Meeting
January 19-20, Charleston, WV
Info: gowv.com/events/2022-winter-meeting

OOGA Annual Meeting
March 2-4, Columbus, OH
Info: www.ooga.org/events

Pennsylvania Independent Oil & Gas Association

115 VIP Drive, Suite 210, Wexford, PA 15090-7906
724-933-7306 • fax 724-933-7310 • www.pioga.org

Harrisburg Office (Kevin Moody)
212 Locust Street, Suite 300, Harrisburg, PA 17101
717-234-8525

Northern Tier Office (Matt Benson)
167 Wolf Farm Road, Kane, PA 16735
814-598-3085

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