The PIOGA Press

The monthly newsletter of the
Pennsylvania Independent Oil & Gas Association
May 2018 • Issue 97

House committee approves conventional oil & gas legislation

Legislation creating a separate statute to govern conventional oil and gas operations passed the House Environmental Resources and Energy Committee on April 30 and will move on to consideration by the full House.

House Bill 2154 (and the identical Senate version, SB 1088) establishes the Conventional Oil and Gas Act, or COGA, based on the framework of the Oil and Gas Act of 1984. The 1984 law was amended in 2011 and then replaced by Act 13 in 2012 to address unconventional operations.

Provisions related to unconventional formations like the Marcellus Shale have been deleted in the COGA, as well as gas storage provisions that remain in Act 13. New provisions address how oil and gas regulation should interact with the Solid Waste Management Act, including the beneficial use of brine and wastewater treatment and disposal. The legislation also addresses and incentivizes voluntary plugging of orphan wells. Updates to the 1984 law address permitting, notice obligations, site restoration, spill remediation, inspections, enforcement and penalties. COGA provides for the continuity of operations, permits, approvals and orders that were developed under both the 1984 act and Act 13 *(April PIOGA Press, page 1)*.

"Many of the regulations developed in response to Act 13 of 2012 were not reasonable or relevant for the conventional oil and gas industry," said Representative Martin Causer (R-Cameron/McKean/Potter), the primary sponsor of the House bill. "The conventional operators aren't asking for zero regulation—they just want fair regulation, and that's what this bill aims to do. The people who operate our conventional oil and gas wells live in the communities where the wells are located. They and their families breathe the same air and drink the same water as everyone else. They pride themselves on environmental stewardship while still running their businesses and providing quality jobs to their employees."

Before its introduction, the legislation was discussed and reviewed extensively by the Pennsylvania Crude Oil

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COGA legislation *Continued from page 1*

Development Advisory Council (CDAC), which consists of members from industry (including two PIOGA representatives), the Department of Environmental Protection, academia and legislators. The legislators considered input from all CDAC members to develop a legislative package that acknowledges the unique needs of the conventional industry while at the same time including essential environmental protections.

DEP signaled its opposition to the legislation as it was under consideration by the Environmental Resources and Energy Committee. Causer expressed disappointment in the DEP's opposition to the bill, and particularly the claims by DEP Secretary Patrick McDonnell that the agency had "very little input" in developing the legislation. In fact, Causer pointed out, the legislation was drafted in large part by members of CDAC, which was created by Act 52 of 2016 to advise and assist DEP with regulatory changes impacting the conventional industry. Several DEP representatives serve on the board, he noted.

PIOGA is actively promoting the legislation, meeting with dozens of lawmakers to explain the proposal and educate them about the conventional oil and gas industry. The association believes the General Assembly will take up the legislation again after the budget process is completed in early summer. ■

PIOGA supports request to rehear rule of capture decision

PIOGA has joined with several other industry organizations in filing legal documents supporting a request by Southwestern Energy Co. for the Pennsylvania Superior Court to rehear a decision calling into question the longstanding principle of rule of capture.

In *Briggs v. Southwestern Energy Production*, a Susquehanna County family alleged that Southwestern Energy had been unlawfully extracting natural gas from beneath their unleased 11-acre parcel from an adjoining property. A Susquehanna County judge granted summary judgement to Southwestern, but a two-judge Superior Court panel reversed the decision and remanded the case to the lower court to determine if the company committed trespass with its shale wells *(April PIOGA Press, page 12)*.

While Southwestern' s defense relied on the well-established rule of capture—essentially, that the owner of a tract of land acquires title to the oil and gas produced from wells drilling on that land, including any oil and gas that may migrate from adjoining lands—the Superior Court said the rule was inapplicable to hydraulic fracturing.

"In light of the distinctions between hydraulic fracturing and conventional gas drilling, we conclude that the rule of capture does not preclude liability for trespass due to hydraulic fracturing," one of the judges wrote. "Therefore, hydraulic fracturing may constitute an actionable trespass where subsurface fractures, fracturing fluid and proppant cross boundary lines and extend into the subsurface area of an adjoining property for which the operator does not have a mineral lease, resulting in the extraction of natural gas from beneath the adjoining landowner's property."

On April 16, Southwestern filed an application for reargument *en banc* before all 20 of the Superior Court judges, claiming the two-judge panel misunderstood crucial facts and contending that the case is of national significance.

"The panel's decision does not only affect Pennsylvania. Because hydrofracturing is the most economic and commonly used method of producing oil and gas across the country, and because Pennsylvania is the second largest natural gas producing state, this court's decision unsettles the legal landscape for the entire industry," the company said in its motion. Southwestern also argued that the panel erred in relying on out-of-state dissenting and vacated opinions to break with settled Pennsylvania law.

PIOGA amicus

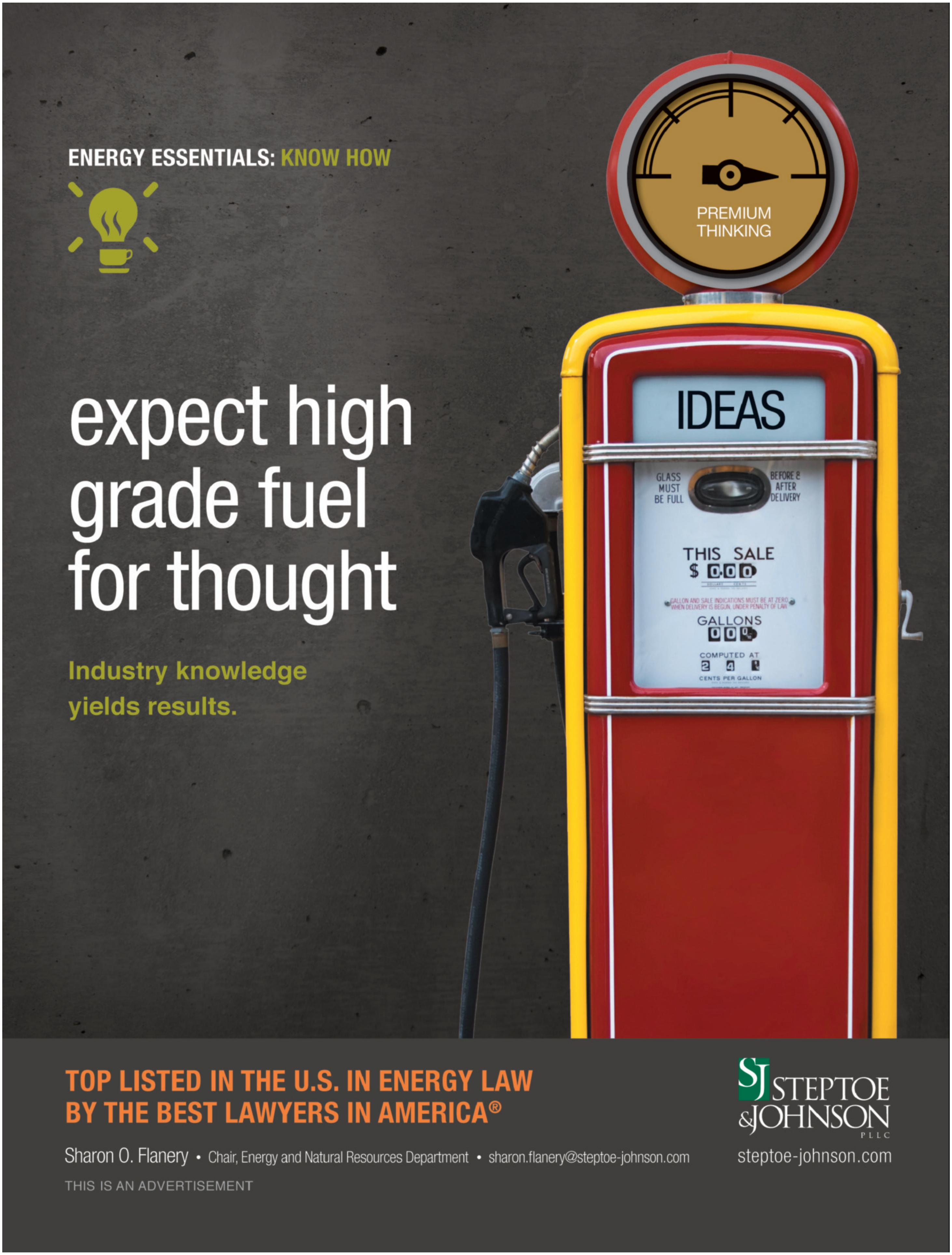
In an *amicus* brief filed with the court on April 16, PIOGA wrote that the court's *Briggs* decision "concluded that the rule of capture does not preclude an action for damages to recover the value of natural gas allegedly drained by hydraulic fracturing operations that occur exclusively on property adjacent to the plaintiffs' property. The decision exposes PIOGA's members to new and complex lawsuits based on longstanding and prudent well-stimulation activities that have never justified any departure from the rule of capture since the Supreme Court first articulated the rule more than 100 years ago."

The association highlighted these important points in its filing:

• The court overlooked a fundamental rationale underlying the rule of capture: property owners and their lessees should be liable only for what they can meaningfully control. If a lessee drills a well entirely within the boundaries of the leased property and then engages in stimulation activities, again within the boundaries of the leased property, the operator has no meaningful control over what happens below the surface.

• The rule of capture should not be changed or discarded merely because hydraulic fracturing or any other type of well stimulation is involved or because the target formation is different than more conventional reservoirs. "Simply put, the rule of capture should apply to all methods of hydrocarbon capture where the well operator's equipment does not invade adjoining unleased tracts. A contrary position would lead to protracted investigation and litigation, as well as the inability to develop tracts near unleased parcels," PIOGA wrote.

• The court overlooked the fact that fracture-stimulation techniques predate the rule of capture. The Supreme Court first articulated the rule in the late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1800s, but efforts to stimulate wells by fracturing date back to 1865 when a patent was granted for an "exploding torpedo."

• The court said the rule of capture should no longer protect lessees engaged in hydraulic fracturing operations because adjacent unleased landowners cannot afford to drill offset wells. PIOGA pointed out, however, that it is incorrect to suggest that the longstanding self-help remedy for adjacent landowners is unavailable to them when they do have the option of leasing to an operator who can bear the cost and share the proceeds. The association asks why the court "believes it is better policy for adjacent unleased landowners to sue for drainage damages rather than execute an oil and gas lease that would create immediate and long-term income for them…. The court's decision oddly encourages a lengthy and disruptive lawsuit that in the end may yield nothing."

• The court endorsed a rationale expressed by one federal judge in West Virginia who decided—in a now-vacated opinion—that the rule of capture should not preclude a trespass-by-fracture cause of action because the rule somehow encourages "stealing" natural resources from beneath the property of an adjacent landowner. "This is a fundamentally false premise," PIOGA averred.

"The rule of capture is a property right that removes liability for engaging in lawful activities that happen to deplete natural resources that underlie multiple tracts of land," PIOGA wrote. "If adjacent property owners do not pursue natural gas development, that is their right. But they should not thereafter be able to recover damages when lawful oil and gas activities on adjacent properties happen to deplete the common source of oil or natural gas that underlies adjoining tracts."

Others submitting briefs in support of Southwestern included the Marcellus Shale Coalition, the Pennsylvania Chamber of Business and Industry, the American Petroleum Institute, the American Exploration & Production Council, and Owen Anderson, an oil and gas scholar at the University of Texas School of Law. ■

Member incentive program launched

Recruit a new member, get rewarded!

PIOGA is rolling out an incentive program intended to promote membership growth and participation in PIOGA while rewarding active members for their consistent efforts toward these goals. Our thanks go out to Robert Beatty Jr. of "O" Ring CNG Fuel Systems, chairman of PIOGA's Membership Committee, for spearheading this exciting new program.

Here are the guidelines:

• Recruiting a new member earns a credit equal to 10 percent of the amount of the first year dues of the newly recruited member.

• Credits must be applied toward reduction of PIOGA dues, PIOGA event fees, PIOGA sponsorships, PIOGA advertising (PIOGA Press and eWeekly only) or PIOGA donations.

• To claim any credits, your membership must be current and in good standing.

• You must inform the PIOGA Membership Committee of your member(s) recruited.

• There is no limitation on how many new members can be recruited per year.

• Credits will not be issued in the form of cash or legal tender.

• Credits cannot be claimed for renewing members who have been in default less than two years.

• Credits must be applied/used within the calendar year of being credited to your PIOGA account or will automatically be applied to your next year's dues.

• You may apply credits toward partial or progressive prepayments to your PIOGA account.

• The incentive program is initially retroactive, beginning January 1, 2018.

Questions? Want to participate? Contact Bob Beatty at rhbeatty@gmail.com or 814-590-4498, or Debbie Oyler, Director of Member Services, at debbie@pioga.org or 724-933-7306 ext. 22.

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This popular summer outing remembers Ted Cranmer, the long-time PIOGA and POGAM board member who passed away in December 2016. The success of the Wanango outing was one of Ted's passions for 10 years, and the event raised thousands of dollars to benefit the mission of the trade associations. We are pleased to honor Ted's legacy.

Find out more at www.pioga.org > News/Events and register today!

Check out these and other upcoming PIOGA events:

- PIOGA's 100th Anniversary Celebration, July 18, Drake Well Museum and Park, Titusville
- 21st Annual Divot Diggers Golf Outing, August 23, Tam O'Shanter Golf Club, Hermitage
- PIOGA Oktoberfest & Annual Meeting, October 17-18, Seven Springs Mountain Resort, Champion

Severance tax legislation: Here we go again

Governor Tom Wolf appeared on April 30 to announce what he called bipartisan new severance tax legislation. PIOGA, however, described the latest iteration of a natural gas production tax as "a four-year bad idea" the governor has touted in his of his proposed budgets.

More than a dozen pieces of severance tax legislation have been introduced in this session of the General Assembly. Two have seen significant action. In late July, the Senate approved a broad revenue package that, among other things, included a volumetric severance tax that varies based on the average annual NYMEX price of natural gas. The House took the Senate's severance tax provisions and inserted them into House Bill 1401, which currently is pending before the full House of Representatives but not scheduled for further consideration at this time *(December PIOGA Press, page 1).*

This newest severance tax bill, HB 2253 (the companion Senate version will be SB 1000), was introduced just as this month's *PIOGA Press* newsletter was going to print. It is sponsored by Representative Jack Wheatley (D-Allegheny). A cursory look at the bill shows it includes these major provisions:

• A volumetric tax based on the average price of natural gas for the preceding calendar year—4.2¢/Mcf if the price is $1.00-3.00/Mcf, 5.3¢ if $3.01-4.99, 6.4¢ if $5.00-5.99 and 7.4¢ if $6.00 or greater. The governor's budget proposal estimates the tax would generate a $248.7 million in the first year, increasing to as much as $400 million by fiscal year 2022-23.

• The tax applies only to wells that are subject to the Act 13 unconventional well impact fee. Gas provided in-kind to leaseholders and gas severed from a storage field are not subject to the severance tax. Additionally, gas severed, sold and delivered by a producer at or within five miles of the producing site for the processing or manufacture of tangible personal property is also exempt.

•The existing impact fee is retained on top of the severance tax, including a guarantee that programs funded by the fee would never receive less than $200 million annually. (In the six years the impact fee has existed, revenue has ranged from a low of $173.2 million in 2016 to a high of $225.7 million in 2013; this year it is expected to generate $219.4 million.)

• An operator would be prohibited from deducting post-production expenses if it would result in royalty payments less than one-eighth of the gross value of the severed natural gas.

• Department of Environmental Protection permitting reforms such as extending permit terms, allowing for the permitting of multiple wells on one well pad with one application and allowing for an adjustment to well bore location of up to 50 feet from the location initially proposed on the plat accompanying a permit application.

Joining Wolf in announcing the legislation on April 30 were Wheatley, Senator John Yudichak (D-Luzerne),

Governor Tom Wolf announces yet another piece of severance tax legislation, along with (left to right) Representatives Jake Wheatley and Bernie O'Neill and Senators John Yudichak and Tom Killion.

Representative Bernie O'Neill (R-Bucks) and Senator Tom Killiron (R-Chester). The Republican support on display was only from southeast Pennsylvania.

The governor's statement included the same platitudes and falsehoods he has repeated time and again: "Since day one of my term as governor, I have fought to enact a reasonable severance tax that would give Pennsylvanians their fair share of the energy boom that is powered by resources that belong to all of us. I, along with this bipartisan coalition, am here to call on the House and Senate to pass these bills and get them to my desk so that they can become law and Pennsylvanians can begin to get the benefits that other states have had for years."

A news release from the governor's office went on to say that Pennsylvania is the only gas-producing state in the nation without a severance tax. "Other major gas producing states like Texas, Oklahoma, Louisiana, and Alaska are collecting billions from the oil and gas industries to help fix roads, build schools, and keep taxes low," the release continued.

For his part, Yudichak, who will be the primary sponsor of SB 1000, said: "The measured severance tax and responsible permitting reforms, embodied in SB 1000, is fair to taxpayers and unleashes the full potential of the natural gas industry to create jobs all across Pennsylvania. I applaud Governor Wolf who has brought together Republicans and Democrats around the central idea that a fair severance tax is essential to protecting the environment and leveraging broader job growth in the natural gas industry."

PIOGA response

PIOGA had a different reaction. President & Executive Director Dan Weaver saw it this way:

"Governor Wolf's proposed severance tax was a bad idea in 2014 and it has continued to be a bad idea for each of the last four years. Nothing has changed in Pennsylvania's tax structure to allow the Commonwealth to become competitive with other energy-producing states with tax policies that actually encourage the production of oil and gas, rather than punish it, as this tax would do. In addition to the nation's highest corporate tax burden incurred by every business in the Commonwealth, natural gas producers continue to have to pay a severance tax, under the guise of an impact fee.

"No other segment of Pennsylvania's economy is taxed as heavily as the natural gas industry. If any other potential economic contributor came to Pennsylvania with the kind of investment that has been made over the last decade by this industry, tax breaks and other incentives would be placed at their feet to encourage their growth. In the case of energy producers, however, this investment has been 100% private, with the zero incentives from state government.

"We need policies that allow this industry to grow rather than make it less attractive for investment. This tax scheme would put us much further down the road of forcing energy producers to look to other states for more favorable treatment."

The state Republican Party also lacked enthusiasm for this latest call for a severance tax.

"In another futile attempt to quench his insatiable appetite for cradle-to-grave tax increases, Governor Tom Wolf has once again chosen his ideology over pragmatism in calling for this economy-stifling natural gas severance tax," Pennsylvania Republican Party Chairman Val DiGiorgio said in a statement. "Pennsylvania's natural gas industry is already struggling under Governor Wolf's onerous regulations. Now, by pushing for a potentially crippling severance tax, Governor Wolf seeks to further harm an industry that has significantly lowered Pennsylvania families' energy bills and has huge potential to create family sustaining jobs."

DiGiorgio cited statistics saying that the natural gas industry has already generated $3 billion in tax revenue since 2008 and $1.5 billion in impact fees since they were enacted in 2012. ■

House passes package of regulatory overreach bills

In the February issue, we described a package of five bills in the state House of Representatives aimed at reigning in overregulation. All of them earned House approval on May 1 and now move to the Senate for consideration. The legislation includes:

• HB 1792, giving the General Assembly the ability to initiate the repeal of any state regulation.

• HB 209, establishing the Independent Office of the Repealer to review existing regulations and make recommendations on repeal to the legislature, the governor and executive agencies. The bill also would establish a moratorium on new regulatory burdens and create a sunset process for existing regulations.

• HB 1237, requiring that the General Assembly vote on a concurrent resolution to approve any regulation with an annual fiscal impact on the private sector of $1 million or more.

• HB 1959, requiring agencies to conduct a review of their permitting activities from the preceding calendar year and issue a report to the General Assembly on the types of permits issued, and the average time frame within which the permit is issued. The legislation also requires state agencies to develop a new permit processing system allowing permit applicants to track the status of a permit application and its review.

• HB 1960, mandating that each state agency appoint a regulatory compliance officer to help educate the regulated community on implementation of both new and existing regulations.

Unfortunately, Governor Wolf opposes the legislation and is likely to veto them if they reach his desk. ■

PIOGA committees make it happen

Shouldn't your company be participating?

PIOGA prides itself on being a member-driven organization and on our ability to accomplish things collectively that our members could not do on their own. And it is within our committees where the work gets done.

Following is a brief look at PIOGA's most active committees. We encourage you or colleagues within your company to become involved in one or more committees.

Environmental Committee

Chairs: Paul Hart, Fluid Recovery Services, LLC , and Ken Fleeman, ABARTA Energy

Meets: Second Wednesday of each month, RLA Learning & Conference Center, Cranberry Township

The Environmental Committee is made up of company leaders and technical experts from a variety of backgrounds working to stay informed about environmental and regulatory issues and engage directly with government regulators on public policy development and implementation. That's no small task as the committee deals with issues involving state government entities including the Pennsylvania Department of Environmental Protection, Fish and Boat Commission, Game Commission, Department of Conservation and Natural Resources, and on the federal level U.S. Environmental Protection Agency, Fish and Wildlife Service, Army Corps of Engineers, as well as the Susquehanna and Delaware River Basin Commissions.

The committee is divided into four highly active subcommittees: Erosion & Sedimentation, Threatened and Endangered Species; Air Quality and Emissions; Water, Waste Management and Recycling; and Well Construction. Workgroups are created to address particular matters of concern.

The committee also organizes PIOGATech seminars that provide training on environmental matters members deal with on a daily basis. Among the topics address are air quality compliance, endangered species issues, water and waste issues, compliance risk management, and more.

Pipeline & Gas Market Development Committee

Chair: Robert Beatty, Jr., "O" Ring CNG Fuel Systems/ Robert Beatty Oil & Gas

Meets: Second Thursday of each month, PIOGA office, Wexford, or field trips to various facilities of interest

For quite some time, what was formerly known as PIOGA's Transportation & Marketing Committee was responsible for monitoring developments at the Pennsylvania Public Utility Commission and Federal Energy Regulatory Commission, as well as reviewing pipeline and LDC tariffs and pipeline open seasons, recommending and managing interventions in rate cases, and developing producer policy positions on natural gas marketing matters.

But then came the shale-gas revolution and the committee saw an opportunity to refocus its mission, which coincided with fewer proceedings involving public utilities. Today the Pipeline & Gas Market Development Committee, or PGMD, also actively works to accelerate greater use of Pennsylvania-produced natural gas in electric generation, alternative-fuel vehicles, commercial applications, exports, industrial demand, distribution demand, and natural gas conversions from other fuels throughout Pennsylvania and surrounding states, while continuing to monitor and, when necessary, participate in PUC and FERC proceedings.

The PGMD Committee is divided into three active subcommittees: Gas-Electric Coordination, Alternative Fueling and Infrastructure, Manufacturing and Large Volume Consumer.

Legislative Committee

Chairs: Ben Wallace, Penneco Oil Company, Inc., and Kevin Gormly, Steptoe & Johnson PLLC

Meets: First Thursday of each month, PIOGA office, Wexford

One of the most important functions of a trade association is government relations. Aside from the market, no other factor has a greater impact on your business than government regulations and legislation. PIOGA's Environmental Committee tackles the regulatory side, while the Legislative Committee focuses on the lawmaking process, primarily in Harrisburg, but also in Washington, D.C., in conjunction with the Independent Petroleum Association of America. The duties of the

Legislative Committee, working closely with PIOGA staff and our government relations firm, include assisting with developing the association's legislative agenda; reviewing bills being introduced and recommending positions and actions to be taken on legislative issues; following through on calls for action by contacting legislators and encouraging PIOGA members to be active in legislative issues; assisting with plans for lobby days, legislative conferences and legislative fund raising; and helping educate the membership on legislative issues through *The PIOGA Press,* PIOGA conferences, the association's website and other forums.

Safety Committee

Chair: Wayne Vanderhoof, RETTEW

Meets: Second Wednesday every other month, RLA Learning & Conference Center, Cranberry Township

The mission of the PIOGA Safety Committee is to serve members and government agencies as a forum to improve Pennsylvania oil and gas industry safety performance through the exchange and communication of best practices, education and training, incident review and sharing, and to identify and communicate industry trends. The committee strives to provide information member companies can use in meeting the varying safety-related requirements of operators and assisting in the training and development of new employees as the industry rebounds.

Among the Safety Committee's goals are organizing PIOGATech training sessions on important safety topics; inviting subject-matter experts to present at committee meetings; coordinating a monthly safety article in *The PIOGA Press;* assembling and developing technical information such as programs, procedures, training materials and similar information to store on the Members Only area of the PIOGA website for members to access; and developing a process to share incident learnings between members to further learning from each other's incidents without revealing companies or employee names.

Tax Committee

Chair: Don Nestor, Arnett Carbis Toothman, LLP

Meets: As needed when issues arise, typically by conference call.

The committee is responsible for monitoring and reporting federal, state and local tax developments and also organizes the annual Oil & Gas Accounting and Tax Update seminar.

Interested or want to know more?

If you're ready to become a part of a committee, please contact Deana McMahan at 724-933-7306 ext. 23 or deana@pioga.org to be placed on the contact list. You will begin receiving all committee-oriented email, including meeting announcements, and will have access to the committee's portal in our Members Only system. The portal is where committee-related documents are stored, and a Group Feed shows recent activity and allows members to post messages.

You can also learn more about any of the committees by going to www.pioga.org, clicking on the Members Only link at the very top of the page and then choosing Committees from the green navigation bar.

We look forward to your involvement! ■

April's PIOGATech on Water and Waste Management

The Environmental Committee hosted its second annual Water and Waste Management PIOGATech on April 26 in Wexford, and it was another very valuable training on the management of water, wastewater and solids in the oil and gas industry for conventional and unconventional operators.

Close to 100 attendees heard from industry experts about the approved and proven techniques for management of water and waste from the well site and obtained a comprehensive overview of industry protocols for documenting, transporting, treating, recycling, reuse, processing, and disposing of water and wastes.

Topics that were covered included industry trends, TENORM waste management, water treatment and disposal technologies and services, DEP waste and air requirements, spill protection, storage and water transfer, regulatory overview, and an operators panel where attendees heard directly from unconventional and conventional producers on how they are managing their water and waste programs.

Katie Klaber from The Klaber Group provided an overview of industry trends.

Our special thanks go out to all the presenters and to our partners Fluid Recovery Services, LLC, Babst Calland and TD Connections, Inc. for their support of this training. Save the date for the next Environmental Committee's PIOGATech on Erosion and Sedimentation Threatened and Endangered Species Training July 26 at the CEC, Inc. Office, Pittsburgh. ■

From left, Jack Bement of Austin Master Services, Shane Brightwell from SC&A, Inc. and Teresa Irvin McCurdy from TD Connections discuss TENORM waste management.

Cinco de Mayo Clay Shoot

FERC 809: More work to be done

By Joyce Turkaly
Director of Natural Gas Market Development

PIOGA members review, discuss and influence policy that we believe will have a positive impact on our industry. Conversely, we refute pre-policy decisions that have the potential to overregulate or create barriers to market development. At times, when we have done our work and our regulatory bodies adopt final rules, if everything appears sound and comprehensive, we rarely look back. The April meeting of PIOGA's Pipeline and Natural Gas Market Development (PGMD) Committee hosted two speakers—Cindi Patterson, Director of Trading & Contracts for Colonial Energy Inc., and Joe Lloyd, VP Operations at Panda Power—to provide their perspective post-North American Energy Standards Board (NAESB) guidelines on gas and electric coordination. Currently in the state, natural gas generation is leading all other downstream segments on demand side usage; an average 829 MW combined cycle facility uses approximately 145,000 Dth/day.

Ms. Patterson spoke to PGMD members on the NAESB gas and electric coordination nomination cycles introduced roughly two years ago, specifically, Federal Energy Regulatory Commission Order 809, which was supposed to provide generators more price discovery on day-ahead gas for day-ahead generation. Ms. Patterson highlighted what is working and what is not working given the FERC rule which implemented a later timely gas nomination deadline and introduced a new ID3 nomination cycle in an attempt to align the gas purchasing and scheduling with day-ahead electric generation pickup from the grid.

She expressed that extending the timely nomination deadline has only delayed the start of cash trading that used to start two hours earlier. She also addressed that adding the additional ID3 nomination cycle does nothing to assure reliability of additional gas supplies needed because the pipelines post restrictions and seals after they confirm what gas is nominated and flowing *after* timely cycle is done. She explained that the electric day runs midnight to midnight and the gas day still runs 10 a.m. to 10 a.m., so depending on how many hours the generation unit gets picked up, gas could be needed intraday and next day for the next day run.

Cindi Patterson of Colonial Energy discusses gas-electric coordination with PIOGA's PGMD Committee.

She mentioned that pipeline maintenance, restrictions and notices of OFO conditions are creating two different pricing scenarios: one is for timely nominations and the second would apply after timely nomination cycle at 2 p.m. Generators typically are notified between 1:30 and 2 p.m. EST by the ISOs or other grids whether their power price bids cleared the day-ahead prices; if they did get picked up, they are locked into using the gas price that they used hours before. Ms. Patterson told members of the PGMD that the extension of the timely nomination deadline does nothing ensure reliable gas because the pipelines could impose seals and restrictions after timely nomination cycle at 2 p.m., so most traders hold off until after they know what is confirmed flowing, which is about 4-4:30 p.m., before they agree to sell gas for the evening cycle for next-gas day.

She also mentioned that multidirectional flow on the pipelines has disrupted the market in such a way where physical flow is not guaranteed—firm capacity purchased by producers with both primary in path receipts and deliveries are now overvalued because the original flow path and delivery points are now saturated, and the capacity is used to flow to secondary points which does not guarantee flow. In addition, new pipeline projects that are being producer driven are at capacity prices in the \$0.70-\$0.80/Dth range, which is not sustainable given the large fluctuation of gas prices at the wellhead. She mentioned that storage facilities and pipelines are trying to capitalize on services like parking and loaning and selling constraint gas off their pipelines as space in the pipelines are underutilized daily. Storage spreads are not high enough for people to commit to long-term storage contracts, so the pipelines appear to be trying to create other services to generate revenue for the unsubscribed storage space. She said some of the parking and loaning is from subscribed no-notice service while some of the long-term firm transportation contracts have and aren't being used daily. One thing that hasn't changed is that power generators do not own storage or enough firm transportation because they cannot commit to the costs and have no way to recover them.

She mentioned that the pipeline grid is about to undergo another radical change once the Rover and Atlantic Sunrise projects are fully operations, which will introduce physical flow to Canada. When flows increase out of this region to the Midwest and Southeast, Northeast prices will have to compete once again with Gulf Coast prices because a great deal of backhaul from this region is going to the Gulf.

"Market dynamics are changing and for the new generation being built here on top of Marcellus wells they may not be guarantee enough 'cheap' Marcellus gas when they need it just because there was a nomination cycle left in the day," she said. ■

Nomination Cycles

Prior to FERC 809	**Post-FERC 809**
Timely – 12:30 p.m.	2 p.m.
Evening – 5:30 p.m.	7 p.m.
ID1 – 11 a.m.	Same
ID2 – 7 p.m.	3:30 p.m.
ID3 – None	8 p.m.
9 a.m. hourly	Same

Pennsylvania Supreme Court rejects DEP's 'water-to-water' theory of violations under the Clean Streams Law

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In a case of first impression, the Pennsylvania Supreme Court rejected the Department of Environmental Protection's untested legal theory that penalty liability under the Clean Streams Law continues as long as any constituents of a release remain in waters of the Commonwealth—days, months and years after the release has been stopped.

On March 28, the Supreme Court held "[t]he *mere* presence of a contaminant in a water of the Commonwealth or a part thereof does not establish a violation of Section 301, 307, or 401 of the Clean Streams Law, since *movement* of a contaminant into water is a predicate to violations." *EQT Prod. Co. v. Com., Dep't of Envtl. Prot.*, 6 MAP 2017, slip op. at *37 (Pa. Mar. 28, 2018) (emphasis in original). In other words, a violation of these sections of the Clean Streams Law is based on the initial entry of pollutants into waters of the Commonwealth, not the presence or movement of constituents within such waters.

The Supreme Court's opinion provides necessary clarification concerning the scope of liability for penalties under the Clean Streams Law for all persons, entities, businesses and industries that are responsible for remediation, those who would redevelop brownfield properties for reuse under Act 2, as well as any property owner with an historic contamination in groundwater that it did not cause. The decision reaffirms that penalty liability is distinct from cleanup liability and recognizes that penalties are neither appropriate nor effective in altering the time that may be necessary for full remediation.

The parallel proceedings between EQT and the department

The court's statutory construction stemmed from a controversy between EQT Production Company and DEP regarding the liability and penalties that could be imposed for a release from an onsite pit at a Marcellus Shale well pad in Tioga County in 2012.

After the department presented EQT with a penalty demand of $1.2 million for the release, EQT filed a declaratory judgment action in the Pennsylvania Commonwealth Court in September 2014 to challenge the department's use of a "continuing violation" theory to support its penalty calculation. EQT asked the court to rule on two issues: first, that a violation of the Clean Streams Law occurs only on a day in which a person allows an industrial waste to actually enter into waters of the Commonwealth, and second, that the mere presence of an industrial waste in waters of the Commonwealth does not, in and of itself, constitute a violation.

The department opposed EQT's application for relief and argued that a violation of the Clean Streams Law occurs when industrial waste or a substance resulting in pollution flows from one water of the Commonwealth into another. The Supreme Court would later call this the department's "water-to-water" theory. In earlier pleadings, the department also alleged that industrial waste from the pit remained in bedrock and soil beneath the impoundment's liner for a period of time longer than the "actual discharge;" industrial waste can bind to the soil or perch above an aquifer, "continually polluting new groundwater;" and this would continue for months or years at the site. *EQT Prod. Co.*, 6 MAP 2017, slip op. at *5. The Supreme Court called this the department's "soil-to-water" theory.

After EQT filed its declaratory judgment action, the department filed a civil penalty complaint with the Pennsylvania Environmental Hearing Board (EHB), seeking a penalty of $4.5 million for the release. EQT stopped the source of the release within 12 days of reporting it on May 30, 2012, and then entered the Act 2 program to clean up soil and groundwater. The post-hearing memo the department filed following a two-week hearing before the EHB in July 2016 asserted that a penalty of nearly $470 million could be assessed under DEP's interpretation of the Clean Streams Law. On May 26, 2017, the board assessed a civil penalty of $1.1 million, including the department's costs. The EHB found that "active releases" from the impoundment continued to the date of the hearing in July 2016, violating the Clean Streams Law daily, but assessed a penalty only through September 27, 2012 (i.e., the date of the excavation of the soils beneath the impoundment's liner). Both parties appealed the adjudication for the Commonwealth Court to review. That appeal has been briefed and oral argument is scheduled for May 9.

Earlier, in the declaratory judgment case, on January 11, 2017, the Commonwealth Court held that Section 301 of the Clean Streams Law "prohibits acts or omissions resulting in the initial active discharge or entry of industrial waste into waters of the Commonwealth and is not a provision that authorizes the imposition of ongoing penalties for the continuing presence of an industrial waste in a waterway of the Commonwealth following its initial entry into the waterways of the

Commonwealth." *EQT Prod. Co. v. Com., Dep't of Envtl. Prot.*, 153 A.3d 424, 437 (Pa. Cmwlth. 2017), *aff'd in part, vacated in part sub nom. EQT Prod. Co. v. Com., Dep't of Envtl. Prot.*, 6 MAP 2017 (Pa. Mar. 28, 2018). The Commonwealth Court did not delineate the contours of the department's multiple theories of continuous liability. The department appealed the January 11, 2017, decision.

The Supreme Court's resolution of the dispute

The Supreme Court rejected the department's expansive and novel theory of civil penalty liability and held that the mere presence of a contaminant in a water of the Commonwealth or a part thereof does not establish a violation of Section 301, 307 or 401 of the Clean Streams Law, because "*movement* of a contaminant into water is a predicate to violations." *EQT Prod. Co.*, 6 MAP 2017, slip op. at *37. The court expressly rejected the department's water-to-water theory of serial violations. *Id.* The Supreme Court largely upheld the Commonwealth Court's January 11, 2017, decision, noting that "discharging or permitting to flow or continuing to do so, directly or indirectly, into waters of the Commonwealth, can reasonably be viewed from the point of the initial release and entry into water. It is less natural, in our view, to view discharges and other forms of release as also entailing serial entries into different waters of the Commonwealth as contaminants migrate through parts of those waters." *Id.* at *29.

The Supreme Court expressed no opinion on the department's soil-to-water theory, namely, whether and to what extent the migration of contaminants through soil into water constitutes a violation of the Clean Streams Law. *Id.* at *37. The court concluded that issue was "not sharply in focus" before it, and that the soil-to-water question "appears to be at issue in the Commonwealth Court pending review of the EHB's penalty determination." *Id.*

The Supreme Court concluded that the General Assembly did not intend to impose penalty liability under the Clean Stream Law that "persist[s] even after all relevant cleanup requirements were met, as long as some microscopic amount of contaminants might remain present to move among waters and parts of waters." *Id.* at *33. The court determined that "if the General Assembly wished to create [this] sort of massive civil penalty exposure . . . , it would have said so more expressly." *Id.* at *33. And "[i]n the absence of such clarity," the department's "expansive construction of a statute that is inexplicit in such regards [is] unreasonable." *Id.* at *34.

By clarifying that civil penalties may only be assessed under the Clean Streams Law for the days of actual movement of a pollutant into waters of the Commonwealth, this precedential decision prevents the imposition of indefinite penalty liability for spills after the discharge into groundwater or surface water ends. ■

Majority of wells are being operated in a manner protective of groundwater

DEP releases data on oil and gas well structural soundness

The Department of Environmental Protection has released the first four years of data on well mechanical integrity submitted by thousands of Pennsylvania oil and gas well operators. A comprehensive analysis of the first year, 2014, shows that the majority of wells in the state are being operated in a manner that greatly reduces the risk for groundwater impacts.

"Our Mechanical Integrity Assessment Program is the most rigorous routine well integrity assessment program to protect groundwater in the United States," said DEP Secretary Patrick McDonnell in a statement accompanying release of the data. "We're committed to protecting Pennsylvanians' health, safety and environment through continuous improvement of our regulatory oversight of the oil and gas industry."

All operators are required to inspect wells on a quarterly basis for structural soundness to ensure that gas migration is prevented, leaks are managed and groundwater is protected. Operators must inspect wells for:

- Leaks outside the surface casing
- Leaks outside the intermediate casing
- Gas flows or pressures inside and outside the production casing
- Escaping fluids (oil, gas, and saltwater)
- Severe corrosion

DEP reviews operators' submitted data for potential problems and violations.

A comprehensive analysis (including file audits and independent site verification) of data submitted in 2014 showed that less than 1 percent of operator observations indicated the types of integrity problems, such as gas outside the surface casing, that could allow gas to move beyond the well footprint. The movement of gas or other fluids beyond a well footprint has the greatest potential to result in environmental concerns.

About 30 percent of wells had gas present outside production casing. In some instances, this occurs due to an approved well design that allows for engineered vents.

Operator compliance with mechanical integrity inspection requirements has been consistent since the program began, with reports submitted for approximately 99 percent of unconventional wells and about 50-60 percent of conventional wells. DEP says its district offices are actively working to improve the number of conventional operators who are in compliance. Those who remain out of compliance are individually responsible for a relatively small number of wells, the department said.

The Mechanical Integrity Assessment program has provided DEP district offices with useful information for identifying potential concerns at wells and more effectively assessing whether operator intervention is necessary to protect groundwater.

Some operators have introduced corrosion monitoring programs, become more proactive in plugging wells with depleted reserves, and improved the accuracy of their well inventories through coordination with DEP.

PIOGA President & Executive Director Dan Weaver commented about the report: "It is nice to get validation from DEP to what the industry has been saying for years. Thank you to Pennsylvania's producers for doing a great job of developing a tremendous resource while going above and beyond in protecting the environment."

The 55-page report can be downloaded from the Mechanical Integrity Assessment page in the Office of Oil and Gas Management section of DEP's website. To find it most easily, enter *PA DEP mechanical integrity assessment* in a search engine. ■

SRBC and industry working together to find common ground

By Teresa Irvin McCurdy
TD Connections/Hydro Recovery

For several years operators, within the Susquehanna River Basin and the staff of the Susquehanna River Basin Commission (SRBC) have been meeting to discuss issues affecting both. Over the years, these meetings have lead to some positive changes for both. The groups met again on April 30 to discuss a variety of topics in which industry will see some immediate wins and some which will require changes to SRBC regulations. It is very important to note that we as an industry will need to do a lot of grassroots advocacy and supply public comments in support of the changes we are seeking if we want them to come to fruition. At this meeting we had 18 people representing 15 companies and 11 SRBC staff.

Here is a list of topics in progress and the next steps:

1. Proposed regulatory program fee schedule. Due to some efficiencies, staff explained that in some areas industry would see decreases in fees and some they would remain the same. The public hearing on this is May 10 and the commission will vote on June 15 for it to become effective July 1, 2018, through end of June 2019.
   a. Approval By Rule (ABR) Consumptive Use fee for Natural Gas remains the same for 2018.
   b. Surface Water Withdrawals are being increased slightly while Groundwater Withdrawals and Diversions are being decreased slightly.
   c. Annual Monitoring and Compliance (AMC) Fee decreased from $1,050 to $850 yearly
2. ABR/AMC Fee industry requests changes to terms.
   a. For all other industries within the basin the term of the ABR is 15 years, but for the natural gas industry it is five years. Industry is asking the SRBC to change the term to 10 years as a compromise and because 10 years seemed to work best for the operators in the meeting. This would allow both new and renewals to have a longer term, thus saving operators money and time. SRBC staff commented that when they tried to extend the ABR term three years ago, they received a lot of negative public comments from environmental groups and others, although many were form letters. SRBC staff also mentioned that what was lacking was support from industry. Therefore, the attempt to increase the term failed. Industry provided assurance that if the commission would try again, that they would greatly increase their public outreach to gain more public comments in support of the commission.
   b. With respect to the AMC Fee, industry questioned what the fee was used for. Staff stated about 25 percent of the $1,050 was used for the Remote Water Quality Network (RWQN) and the remaining 75 percent was used for monitoring and compliance. Staff explained that due to efficiencies and that more were coming into the system (meaning more ABRs were subject to the AMC Fee), revenue was higher so they could reduce the individual fee.
   c. In 2010, the SRBC passed the regulatory language that authorized the AMC Fee, but it grandfathered in preexisting ones. So over the years, as the grandfathered ABRs are being renewed or modified, they are now subject to the AMC Fee, which is why more are paying into the RWQN. However, this also means that during this time, a small majority has been paying for something that a larger population has been supposedly receiving some benefit from. Some operators in the room spoke out in support of the RWQN, stating that it was a good system to have to show where the water is being used and that the use of water is not harming the aquatic or river life.
   d. In mid-May, companies that have more than 25 renewals will receive a letter from the SRBC asking if they want to elect to be billed annually or quarterly for the AMC Fee. Due to some operators having a very large number of ABRs that they pay the AMC Fee on annually, we had requested that we be able to pay quarterly, and the commission granted our request.
   e. Industry has asked if the commission would be open to also allow a company to roll the AMC Fee into a new ABR so that can be included as a capital expense. In other words, if the ABR would be for 10 years, then you would pay the ABR fee plus the current AMC Fee times 10; therefore, you would not have to then pay again until the ABR is up for renewal. Although the commission is open to this concept, they would like to see some language on which industry needs to come together yet and work out the details.
   f. SRBC said the earliest this would be proposed is September, but most likely December, with a public comment period of 60 or 90 days. So the final regulation would not become effective until March or June of 2019.
   g. This is a high priority, so if you are interested please contact me.
3. Consumptive Use Mitigation Policy. During the public comment, the Pennsylvania Chamber of Business and Industry and others had stated that they prefer to write a check rather than having to do the mitigation themselves. The commission supports this as it will allow the commission to spread the funds over other watersheds and have the discretion to use the money for the projects they deem important.
   a. Industries support this because they make a one-time payment and do not have to worry about any further liability in case the mitigation

project would cost more money.

b. The policy is expected to go to the commission in September, then reach out to stakeholders over the summer of 2019.

4. CU Monitoring and Data Reporting. Effective July 1, the owner of the docketed source will have to do all of the reporting and paying of the CU fees.

a. Currently, if the owner of a docket is water sharing with someone, then the owner reports its own use and pays its own fees and the company it is sharing with pays its own fees and reports its own numbers. Staff explained that this was causing some confusion and was changing it to make it simpler.

5. Letters of Intent were no longer required as of the beginning of the year unless there is a new docket, the docket is renewed or you are going to be a new user on the docket. Industry had requested this, and the commission agreed to it. Most in the room said they were very thankful for this change.

6. Changed the ABR approvals to 60 days to allow for more time.

7. Eliminating the definition of hydrocarbon and storage facilities. Staff said it has never issued a single approval under this, and with how things are going doesn't look as though it will. Consequently, they are doing away with it.

8. Proposing to eliminate subsection 15 that will no longer require newspaper notification for ABR, whether new or renewal. However, this is a regulatory change, so if the commission receives a significant number of comments against it, then it may end up requiring a notice for new ABRs but not on renewals. Staff commented that operators still must provide notification to the appropriate jurisdictions and "the" landowner where located, but not to newspapers

9. DEP/SRBC Coordination of reporting data. Industry explained that the Department of Environmental Protection defines and requires reporting of waste for post-hydraulic fracturing reports one way and the SRBC seeks the same information but on a different time frame with slightly different definitions. Industry asked if SRBC could work with DEP to determine how to make the reporting the same.

a. After an in-depth conversation, the SRBC was going to look at what industry reports to DEP Waste monthly to see if that would satisfy their needs and to see if they can get that information from DEP so that Industry would not have to report this same information to SRBC anymore. ■

If you want more information or have any questions, please call Teresa at 717-329-6402 or email teresa@tdconnections.com.

Hiring? Look to the PIOGA Career Center

Now that activity is ramping up again, many in our industry are seeking qualified applicants for open positions. PIOGA's website includes a section where members can post job openings.

Click on the Careers drop-down menu at www.pioga.org for the listings and the submission page.

DEP awards $1.6 million to 19 alternative fueling projects

The Department of Environmental Protection has announced the approval of funding through the Alternative Fuel Incentive Grants (AFIG) program to support 19 alternative fuel projects.

More than $1.6 million in grants were awarded across three categories: Vehicle Projects, Refueling Infrastructure Projects and Innovative Technology Projects. The awards for vehicles will save approximately 180,000 gallons of gasoline and diesel fuel annually, while the refueling infrastructure and technology awards will help pave the way towards a cleaner future for transportation in Pennsylvania, the department said in announcing the grants.

The full list of awardees includes these projects:

Vehicle Projects

• AAA Club Alliance, AAA Propane Vehicle Project (Philadelphia County), $14,800. Purchase two propane vehicles for the club's towing service.

• Armstrong Conservation District, Mobile Education Display CNG Retrofit (Armstrong), $5,957. Purchase and CNG retrofit a 2017 GMC Sierra 3500 HD pickup truck to be used in a new education and outreach program.

• Buco Transportation Incorporated, Slippery Rock Area Alternative Fuel School Bus Initiative (Butler), $15,000. Purchase three propane-powered Blue Bird Vision school buses.

• Centre County Recycling and Refuse Authority, CNG Commercial Recycling Trucks (Centre), $36,424. Purchase two CNG commercial recycling trucks as part of a fleet overhaul to replace all diesel recycling collection equipment with CNG-powered vehicles.

• Chatham University, Chatham University Vehicle Replacements (Allegheny), $14,881. Purchase a 2017 Toyota Camry LE and two 2017 Chrysler Pacifica hybrid vehicles for use within the university community.

• Jerome H. Rhoads, Inc. dba Rhoads Energy, Rhoads Energy Autogas Fleet Project (Lancaster), $50,977. Retrofit eight leased new vehicles (seven Ford Transits and one Ford Explorer) to replace aging vehicles in the fleet.

• Mlaker, LLC, Propane 2017 (Somerset), $45,000. Purchase nine new propane-powered school buses.

• New Oxford Municipal Authority (Adams), $12,450. Purchase two CNG bi-fuel vehicles.

• Peoples Natural Gas Company LLC, Peoples Vehicle Retrofit and/or Purchase Project (Washington, Allegheny), $129,771. Purchase and convert 17 new bi-fuel natural gas vehicles.

• Rose Tree Media School District, Rose Tree Media School District Natural Gas Project Phase 4 (Delaware), $38,480. Purchase CNG buses. This project will increase the number of CNG buses used by the district to 37 and will make the fleet 50 percent CNG-fueled.

• Schwan's Home Service, Inc., Propane Powered Frozen Food Delivery (Butler, Cumberland, Lancaster, Washington, Westmoreland), $290,605. Lease 38 propane-powered, Class 4 frozen food delivery trucks.

• UPMC, UPMC Gas Migration Project, Phase III (Allegheny), $61,925. Purchase six new dedicated CNG buses to replace diesel buses in the UPMC employee transit operation.

Refueling Infrastructure Projects

• A.J. Blosenski, Inc., Honey Brook Biodiesel Fleet Refueling Station (Chester), $446,749. Develop and construct a fleet refueling station to dispense biodiesel fuel to an existing fleet of more than 100 light-duty and heavy-duty trucks used in waste and recycling collection.

• Einstein Medical Center Montgomery, Hospital EV Charging Station for Staff & Public (Montgomery), $42,105. Install 10 wireless network-controlled charging stations for visitor, employee and community electric vehicle charging.

• Jerome H. Rhoads, Inc. dba Rhoads Energy, Rhoads Energy Autogas Refueling Station Project (Lancaster), $19,709. Install a propane fueling station at bulk plant.

• New Oxford Municipal Authority, NOMA CNG Fueling Station (Adams), $5,500. Install CNG fueling infrastructure at the water/sewer treatment facility owned by the authority.

• Peoples Natural Gas Company LLC, Peoples Refueling Infrastructure Project (Washington, Allegheny), $272,500. Upgrade two CNG fueling stations.

• Sharp Energy, Philadelphia Propane Fueling Infrastructure Project (Philadelphia), $24,800. Help the delivery company DHL fuel its vehicles with propane/autogas.

Innovative Technology Project

• CP Manufacturing, Innovative High-Pressure Hydrogen Storage (Allegheny), $140,050. Design and test pressure vessels used for the storage and transportation of alternative fuel gases such as hydrogen and CNG. The vessels manufactured as a result of this project would primarily be used to transport hydrogen to refueling stations. ■

Attorneys general sue EPA to force methane regs for existing sources

On April 5, Pennsylvania joined 13 other states (New York, California, Connecticut, Illinois, Iowa, Maine, Massachusetts, Maryland, New Mexico, Oregon, Rhode Island, Vermont and Washington), the District of Columbia and the City of Chicago in a lawsuit against the U.S. Environmental Protection Agency to force the promulgation of performance standards for existing oil and natural gas sources under section 111(d) of the Clean Air Act.

The lawsuit follows notices of intent to sue the EPA dated June 29, 2017, and is based in significant part on the 2009 EPA determination that methane, along with other greenhouse gases, endangers public health and welfare because of its contribution to climate change.

PIOGA and the other associations involved in the existing challenge to the New Source Performance Standards will evaluate options to intervene in the lawsuit on behalf of EPA. ■

Creating new markets for natural gas, one plant at a time

Changes over the last decade have created tremendous opportunities for natural gas producers across the country and in Pennsylvania in particular. Pressure to reduce emissions; the economics of using a cost-effective, local product; and easy access to an abundant raw material have motivated power-producing plants to transition from other fuel sources to natural gas.

That was the case in 2012 when leaders of the NRG Shawville power plant in Clearfield County faced the plant's imminent closure and sought to convert the coal-fired generator to natural gas. In September 2015, plant representatives turned to Greylock Energy to collaborate and construct the facilities necessary to support a successful and efficient plant conversion.

According to Ryan Deaderick, senior vice president of production & midstream, Greylock worked directly with the NRG construction and operations teams to design and build facilities and lay pipeline to deliver natural gas to the power plant. Deaderick leads the company's team of in-house experts who partner with large end users of natural gas to design and construct customized solutions for supply needs.

NRG completed the conversion in late 2016 and the transportation of locally produced natural gas through Greylock pipelines has helped power the Commonwealth through sweltering summers and bitter winters.

Deaderick credits his team members and their dedication for the success of the project. "Thanks to our culture of teamwork, we have developed a reputation for quality with particular expertise and knowledge about the midstream business in Appalachia," he said. "That is why downstream users, like industrial manufacturers and power producers, have begun bringing their supply challenges to us. We offer an invaluable service that simply can't be found elsewhere."

One challenge that has plagued the industry over the last two to three years is depressed prices. Deaderick argued that a way to boost and stabilize prices is to increase demand for our product—creating new markets, products and end uses. "That's exactly what we did with the Shawville plant. It is really exciting to be a part of creating new markets for natural gas," he related.

Deaderick continued, "We have created for ourselves a nice niche in the market. We have the expertise and manpower to provide customized design-build projects for downstream users of natural gas. So, we can turnkey midstream or transportation capital projects for large natural gas consumers—on time and on budget."

Since its commissioning in September of 2016, Greylock Midstream's Clearfield pipeline system has transported and conditioned over 19 billion cubic feet of locally produced natural gas that has been burned to generate electricity at the Shawville plant.

Greylock Energy is an oil and natural gas exploration, production and midstream company backed by ArcLight Capital Partners in fall 2017. Greylock is headquartered in Charleston, West Virginia, with offices scattered throughout West Virginia and Pennsylvania and operations across the nation. The vast majority of the company's assets are located in the Appalachian Basin, which comprises more than 900,000 acres, about 4,400 wells and 2,600 miles of pipeline. Led by CEO Kyle Mork, Greylock's leadership is an experienced team with a combined 122 years in the energy industry and possessing a wealth of knowledge and unmatched expertise relating to operations, particularly in Appalachia. ■

PIOGA Member News

EarthRes educates WVU students on careers in oil & gas industry

EarthRes Group, Inc., a full-service engineering and consulting firm headquartered in Bucks County and with an Appalachian Regional Office in Morgantown, West Virginia, was invited to present to West Virginia University Environmental & Energy Resource Management Students on career opportunities within the oil and gas industry.

On April 11, Howard G. Murphy, Jr., P.E., Director of Energy Services at EarthRes, spoke to over 30 Environmental and Energy Resource Management students regarding career opportunities within the petrochemical industry.

"As a whole, the petrochemical industry is poised for growth, with slated development and projected production levels positioning the US to be the global leader in the next 10 years. There is estimated to be $145 billion in petrochemical industrial facility expansions in the U.S. by 2025, with several petrochemical operations slated for development in the WV/OH/PA tristate area. The Appalachian Basin, is slated to be supplying 40 percent of America's total natural gas production in the next 12 years," states Murphy.

Murphy continues, "This regional expansion will require appropriate infrastructure development, greatly improving the regional economy and job market for trained energy professionals. We are happy to help cultivate these students to be future oil and gas young professionals and keep these jobs here at home with students trained right here in West Virginia." ■

New/returning PIOGA members
Welcome, and welcome back!

ACF Environmental
102 Center Street, Evans City, PA 16033
724-432-3092 • www.acfenvironmental.com
Service Provider—geotextiles, geogrid and cellular confinement products

AES Specialized Services
PO Box 156, Herman, PA 16039
724-841-0341
Service Provider—clearing and grubbing, containment, pipeline construction/services

American Augers/Trencor
102 Alyssum Drive, Butler, PA 16001
419-750-4408 • www.americanaugers.com
Service Provider—manufacturer of American Augers directional drills, Trencor trenchers and all support equipment

Coen Energy, LLC
1045 West Chestnut Street, Washington, PA 15301
724-223-5500 • www.coenenergy.com
Service Provider—provider of fuel and fueling services to the oil and gas industry

Dawn Energy Service, Inc.
804 Mahoning Road, Templeton, PA 16259
724-868-2837
Service Provider—well plugging

Perma-Fix Environmental Services
325 Beaver Street, Ste. 3, Beaver, PA 15009
724-728-3960 • www.perma-fix.com
Professional Firm—NORM and TENORM management and consulting services

RETTEW Associates, Inc.
3020 Columbia Avenue, Lancaster, PA 17603
717-394-3721 • www.rettew.com
Professional Firm—full-service multidisciplinary national engineering consulting firm

SECUR
409 Broad Street, Ste. 250, Sewickley, PA 15143
888-484-4031 • www.securllc.com
Professional Firm—providing packaging, containers, and truck and rail transport of oil and gas wastes for disposal

PIOGA Member Profiles

Introduce your company

Introduce your company and tell other members what you offer to Pennsylvania's oil and gas industry. The guidelines for making a PIOGA Member Profile submission are:

• Include a brief history of your company. When and where was it founded, and by whom? Is the company new to the oil and gas industry in general or to Pennsylvania?

• Describe the products and services you offer specifically for the oil and gas industry. Do you have a product in particular that sets your company apart from the competition?

• If applicable, tell how the business been positively impacted by Pennsylvania's oil and gas industry. Have you expanded, added employees or opened new locations?

• Include a website address and/or phone number.

• Your submission may be a maximum of 400-450 words and should be provided as a Word document. Use minimal formatting—bold and italic fonts are OK, as are bulleted or numbered lists. Your submission is subject to editing for length, clarity and appropriateness.

• Include your company logo or a photo. Images must be high-resolution (300 dots/pixels per inch or higher) and in any common graphics format. Please include identifications for any people or products in a photo. Send image files separately, not embedded in your document.

Email material to Matt Benson at matt@pioga.org. This is a free service to our member companies and publishing dates are at the discretion of PIOGA. If you have questions, email Matt or call 814-778-2291.

Are you taking advantage of PIOGA's online Members' Only system?

Here are some of the things you can do:

- Connect with other members
- Register for PIOGA events
- Search for products and services
- Access committee resources
- Update your membership profile
- Pay your dues
- Company main contacts can add/ delete other company contacts
- Update your profile
- Take advantage of government advocacy and education resources

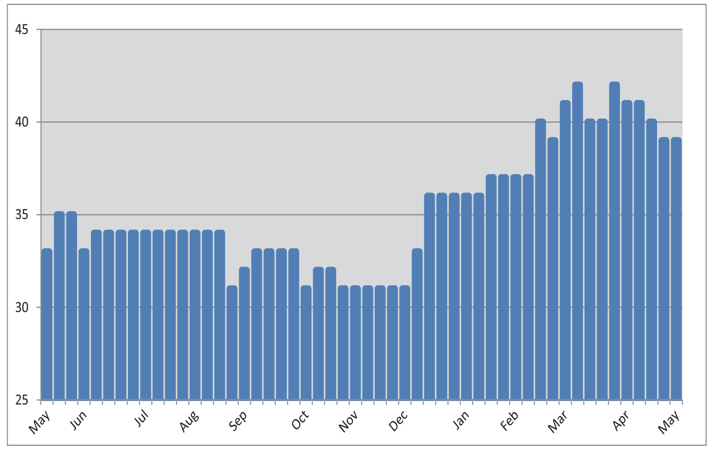
It's easy and fast to log into your account!

Just click on the Members Only link at the top of our homepage, **www.pioga.org,** and input your username (usually your email address) and password. If you don't remember your password, just click *Reset my password* and you'll receive a new one via email.

Try it today!

Oil & Gas Dashboard

Pennsylvania Rig Count



Penn Grade Crude Oil Prices

Natural Gas Futures Closing Prices

Month	Price
June 2018	$2.717
July	2.746
August	2.752
September	2.734
October	2.744
November	2.789
December	2.897
January 2019	2.979
February	2,946
March	2,842
April	2,556
May	2.529

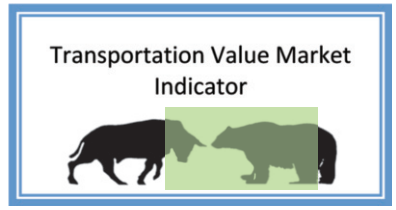
Prices as of May 4

Sources

American Refining Group: www.amref.com/Crude-Prices-New.aspx
Ergon Oil Purchasing: www.ergon.com/prices.php
Gas futures: quotes.ino.com/exchanges/?r=NYMEX_NG
Baker Hughes rig count: phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-reportsother
NYMEX strip chart: Emkey Energy LLC, emkeyenergy.com

Northeast Pricing Report — May 2018

While overall trading was mixed, each trading term was very consistent. The front month pricing was down for every trading point. Dominion South had the lowest decrease of $0.05 per MMBtu, while Algonquin saw the largest decrease of $1.63 per MMBtu. The one-year term had increases that ranged from a minuscule amount for Transco Leidy to $0.11 per MMBtu for Algonquin. While the entire trading term may have seen mixed trading, the range was very narrow. Dominion South decreased the greatest amount of $0.02 per MMBtu and Transco Z6 had the greatest increase of $0.09 per MMBtu. Transportation values were mixed across the board. Transportation from Dominion South and Leidy to Algonquin both had the largest decreases in value of $1.58 and $1.33 per MMBtu respectively. Dominion to TETCO M3 and TETCO M3 to Transco Z6 had minor decreases of $0.03 and $0.06 per MMBtu respectively. However, there were some increases in value. Leidy to TETCO M3 and Algonquin rose $0.22 and $0.16 per MMBtu respectively. Forecasters are expecting weather patterns to "remain neutral to bearish into the foreseeable future, with much larger injections to come...we now look to the first signs of widespread heat and see the southern U.S. playing out warmer than normal in late May, so if it were to continue into early June, cooling degree days could begin to take a bigger bite out of injections with increasing power burns."



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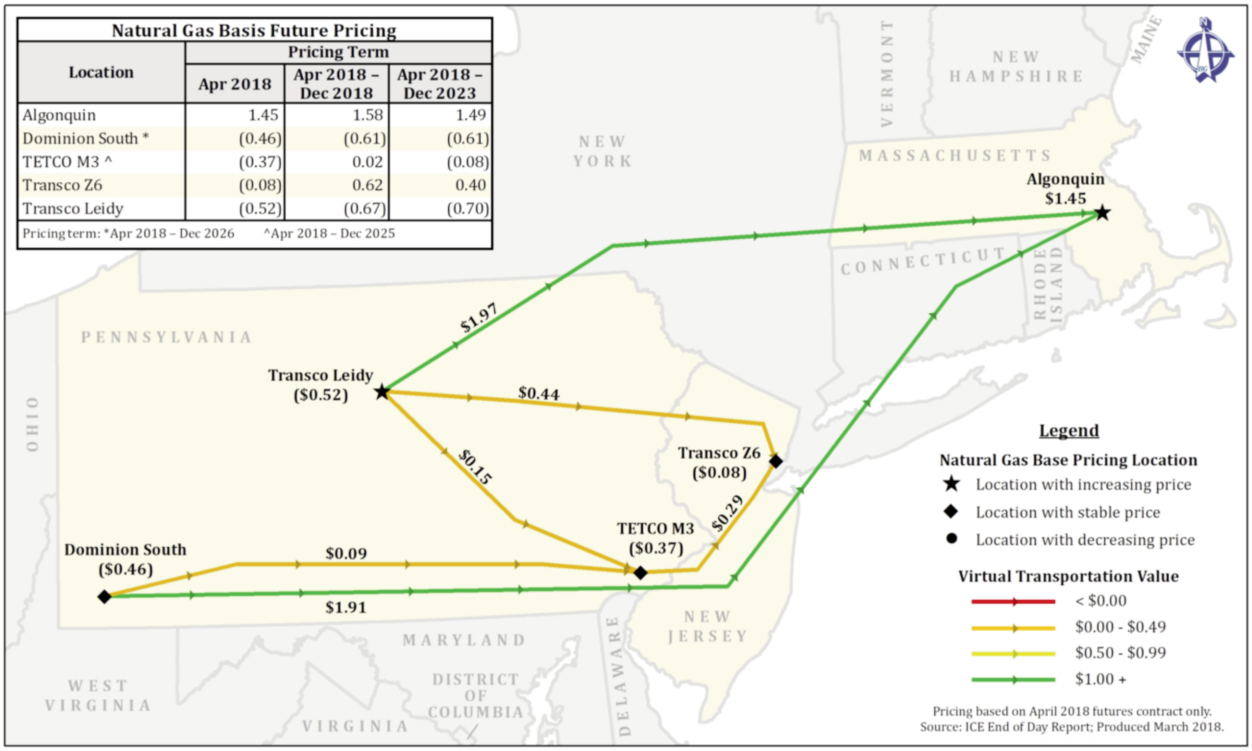
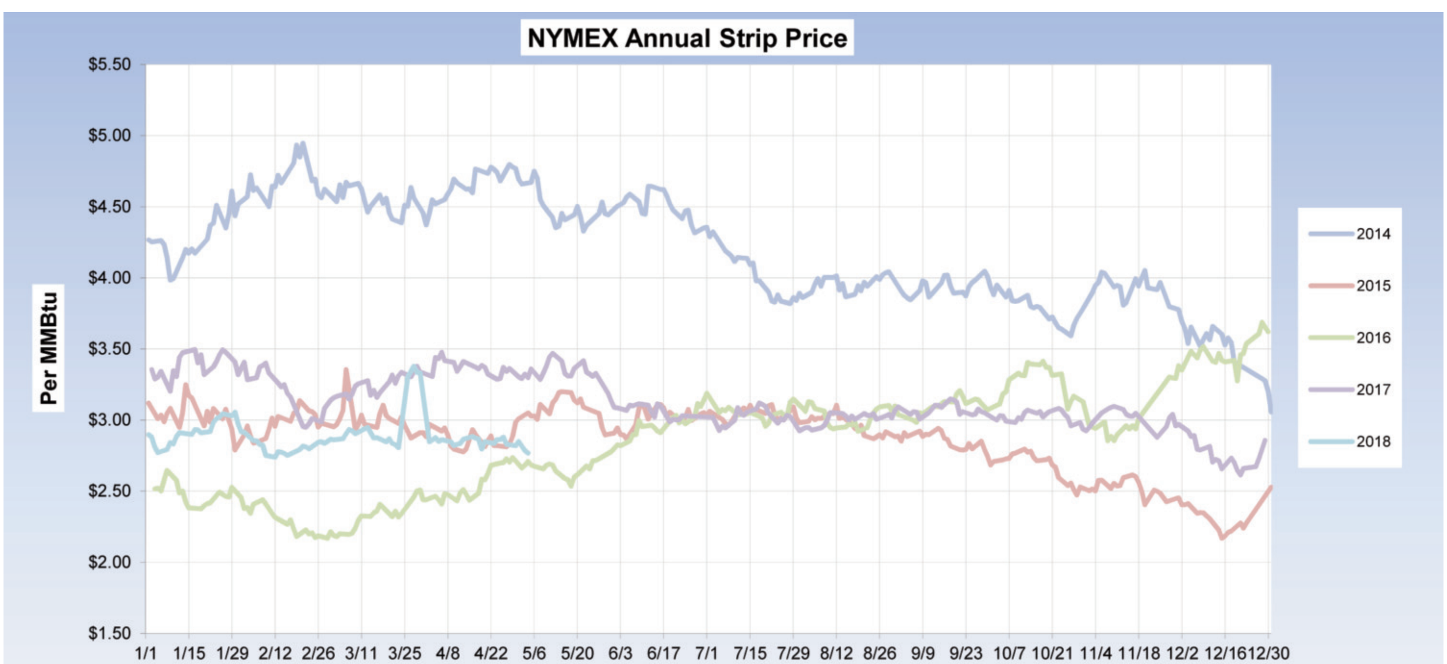
www.bertison-george.com



Natural Gas Basis Future Pricing

Location	Pricing Term		
	Apr 2018	Apr 2018 – Dec 2018	Apr 2018 – Dec 2023
Algonquin	1.45	1.58	1.49
Dominion South *	(0.46)	(0.61)	(0.61)
TETCO M3 ^	(0.37)	0.02	(0.08)
Transco Z6	(0.08)	0.62	0.40
Transco Leidy	(0.52)	(0.67)	(0.70)

Pricing term: *Apr 2018 – Dec 2026 ^Apr 2018 – Dec 2025



Spud Report: April 2018

The data show below comes from the Department of Environmental Protection. A variety of interactive reports are available at www.dep.pa.gov/DataandTools/Reports/Oil and Gas Reports.

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
ARD Operating LLC	2	4/2/18	081-21711	Lycoming	Cogan House Twp
		4/3/18	081-21728	Lycoming	Cogan House Twp
Cabot Oil & Gas Corp	4	4/2/18	115-22304	Susquehanna	Lathrop Twp
		4/2/18	115-22326	Susquehanna	Lathrop Twp
		4/2/18	115-22302	Susquehanna	Lathrop Twp
		4/2/18	115-22303	Susquehanna	Lathrop Twp
Cameron Energy Co	1	4/10/18	123-48084*	Warren	Sheffield Twp
Chesapeake Appalachia LLC	3	4/16/18	113-20389	Sullivan	Cherry Twp
		4/23/18	113-20391	Sullivan	Colley Twp
		4/24/18	113-20394	Sullivan	Colley Twp
Chevron Appalachia LLC	23	4/2/18	051-24633	Fayette	Luzerne Twp
		4/2/18	051-24641	Fayette	Luzerne Twp
		4/2/18	051-24643	Fayette	Luzerne Twp
		4/2/18	051-24642	Fayette	Luzerne Twp
		4/2/18	051-24644	Fayette	Luzerne Twp
		4/2/18	051-24645	Fayette	Luzerne Twp
		4/2/18	051-24646	Fayette	Luzerne Twp
		4/2/18	051-24647	Fayette	Luzerne Twp
		4/2/18	051-24648	Fayette	Luzerne Twp
		4/13/18	129-28989	Westmoreland	S Huntingdon Twp
		4/13/18	129-28990	Westmoreland	S Huntingdon Twp
		4/13/18	129-28986	Westmoreland	S Huntingdon Twp
		4/13/18	129-28987	Westmoreland	S Huntingdon Twp
		4/13/18	129-28988	Westmoreland	S Huntingdon Twp
		4/13/18	129-28979	Westmoreland	S Huntingdon Twp
		4/13/18	129-28980	Westmoreland	S Huntingdon Twp
		4/13/18	129-28981	Westmoreland	S Huntingdon Twp
		4/13/18	129-28985	Westmoreland	S Huntingdon Twp
		4/13/18	129-28978	Westmoreland	S Huntingdon Twp
		4/13/18	129-28977	Westmoreland	S Huntingdon Twp
		4/13/18	129-28982	Westmoreland	S Huntingdon Twp
		4/13/18	129-28983	Westmoreland	S Huntingdon Twp
		4/13/18	129-28984	Westmoreland	S Huntingdon Twp
Chief Oil & Gas LLC	5	4/18/18	015-23371	Bradford	Wilmot Twp
		4/18/18	015-23374	Bradford	Wilmot Twp
		4/23/18	081-21724	Lycoming	McNett Twp
		4/23/18	081-21725	Lycoming	McNett Twp
		4/16/18	115-22284	Susquehanna	Harford Twp
CNX Gas Co LLC	4	4/28/18	129-28967	Westmoreland	Bell Twp
		4/29/18	129-28963	Westmoreland	Washington Twp
		4/29/18	129-28964	Westmoreland	Washington Twp
		4/29/18	129-28976	Westmoreland	Washington Twp
Dunham Energy Partners LLC	1	4/2/18	053-30840*	Forest	Kingsley Twp
EQT Production Co	5	4/17/18	059-27655	Greene	Morris Twp
		4/17/18	059-27658	Greene	Morris Twp
		4/17/18	059-27656	Greene	Morris Twp
		4/5/18	125-28287	Washington	Carroll Twp
		4/5/18	125-28290	Washington	Carroll Twp
Howard Drilling Inc	1	4/6/18	083-56927*	McKean	Wetmore Twp
MSL Oil & Gas Corp	1	4/30/18	083-56652*	McKean	Hamilton Twp
PennEnergy Resources LLC	6	4/10/18	007-20569	Beaver	Marion Twp
		4/10/18	007-20570	Beaver	Marion Twp
		4/10/18	007-20571	Beaver	Marion Twp
		4/10/18	007-20572	Beaver	Marion Twp
		4/11/18	007-20573	Beaver	Marion Twp
		4/11/18	007-20574	Beaver	Marion Twp
Range Resources Appalachia	4	4/19/18	125-28398	Washington	Mt Pleasant Twp
		4/19/18	125-28399	Washington	Mt Pleasant Twp
		4/20/18	125-28396	Washington	Mt Pleasant Twp
		4/20/18	125-28397	Washington	Mt Pleasant Twp
Repsol Oil & Gas USA LLC	8	4/18/18	115-22481	Susquehanna	Apolacon Twp
		4/19/18	115-22483	Susquehanna	Apolacon Twp
		4/20/18	115-22484	Susquehanna	Apolacon Twp
		4/21/18	115-22486	Susquehanna	Apolacon Twp
		4/23/18	115-22487	Susquehanna	Apolacon Twp
		4/24/18	115-22485	Susquehanna	Apolacon Twp
		4/25/18	115-22482	Susquehanna	Apolacon Twp
		4/26/18	115-22480	Susquehanna	Apolacon Twp
Seneca Resources Corp	3	4/25/18	047-25020	Elk	Jones Twp
		4/25/18	047-25021	Elk	Jones Twp
		4/26/18	047-25022	Elk	Jones Twp
SWEPI LP	3	4/17/18	117-21974	Tioga	Middlebury Twp
		4/17/18	117-21975	Tioga	Middlebury Twp
		4/18/18	117-21976	Tioga	Middlebury Twp
SWN Production Co LLC	2	4/6/18	115-22361	Susquehanna	Jackson Twp
		4/6/18	115-22362	Susquehanna	Jackson Twp

	April	March	February	January	December	November
Total wells	**76**	**113**	**59**	**71**	**67**	**79**
Unconventional Gas	72	104	52	63	63	70
Conventional Gas	0	3	0	0	0	0
Oil	4	6	7	8	4	9
Combination Oil/Gas	0	0	0	0	0	0

Calendar of Events

PIOGA events

Info: www.pioga.org/events

Ted Cranmer Memorial Golf Outing & Steak Fry
June 4, Wanango Golf Club, Reno

PIOGA's 100th Anniversary Celebration
July 18, Drake Well Museum and Park, Titusville

21st Annual Divot Diggers Golf Outing
August 23, Tam O'Shanter Golf Club, Hermitage

Fall Oktoberfest and Annual Meeting
October 17-18, Seven Springs Mountain Resort, Champion

Other association & industry events

MSC Successfully Managing Horizontal Directional Drilling, Slope Stabilization and Landslide Mitigation
June 20, Hilton Garden Inn, Canonsburg
Info: marcelluscoalition.org/get-involved/training-and-events

IPAA Midyear Meeting
June 25-27, Austin, TX
Info: www.ipaa.org/events

IOGANY Summer Meeting
July 19, Peek n' Peak, Clymer NY
Info: www.iogany.org/events.php

IOGAWV Summer Meeting
August 5-7, The Greenbrier, White Sulphur Springs, WV
Info: iogawv.com/2018-summer-meeting-registration

OOGA Summer Meeting
August 6-7, Zanesville Country Club, Zanesville, OH
Info: www.ooga.org/events/event_list.asp

Find more events at www.pioga.org >>

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