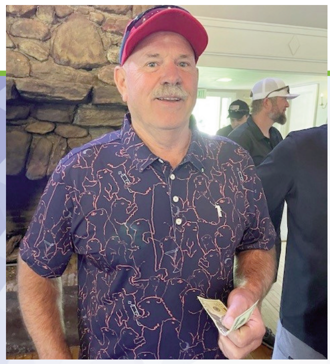
The PIOGA Press

The monthly newsletter of the
Pennsylvania Independent Oil & Gas Association

June 2024 • Issue 170

PIOGA's 2024 Oil Patch Classic

On June 4th, PIOGA held its annual Oil Patch Classic Golf Outing & Steak Fry at the Wanango Country Club in Reno, Pa. The event was a huge success and enjoyed by all! **PIOGA would like to thank the sponsors of the event and all participants!** Check out some of the event photos and make sure to visit the Photo Galleries section at *pioga.org* to view more photos from the Event! *(https://pioga.org/about/photo-galleries)*



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2024 PIOGA Committee Schedule

Market Development and Environmental Committee (Market Development 9-10:30 am. Environmental 10:45 am - 12:30 pm.)

July 10**– Shell Cracker Plant Tour; **August 14; September 11**; **October 9; November 13** – Travel Day TBD; **December 11

Membership Committee (Meetings will be held from 2-3 pm the second Thursday of each month) ***July 9; August 13; September 10; October 8; November 12; December 10***

Legislative Committee (1:30 - 3 pm. All Legislative Committee Meetings are virtual/call-in only.) ***July 11; August 1; Sept. 5; Oct. 3; Nov. 7; and Dec. 5.***

Diversity Committee (9-10 am. All Diversity Committee Meetings are virtual/call-in only.) ***Sept. 3; and Dec. 3.***

PIOGA committee chairs and staff are hoping to see more people in-person in 2024! The committee meetings are more collaborative and valuable when our members are in the same room.

Please contact Deana McMahan at deana@pioga.org or 724-933-7306 ext. 23 if you are interested in joining a committee or have any questions about the schedule.

Committee meetings are for PIOGA members only and dates are subject to change. Go to www.pioga.org for up*dates.*

The Growth of Data Centers and The Impact on Pennsylvania Natural Gas

Joseph Baran - Bertison-George, LLC, Principal

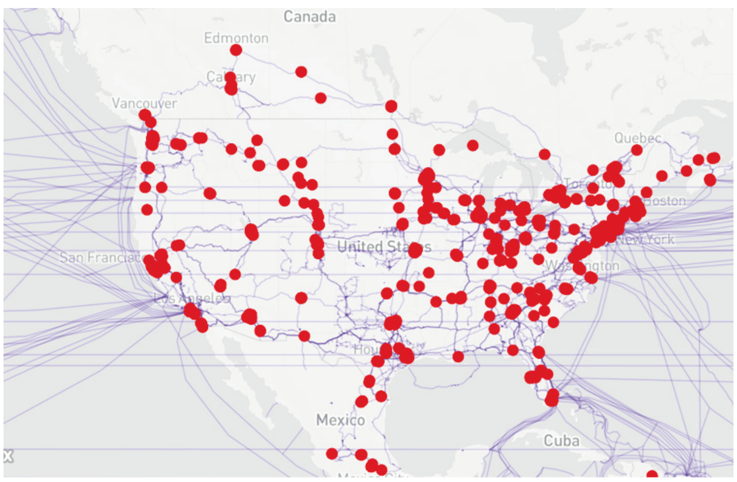
US data centers are growing and transforming due to increased demand for cloud computing and digital technologies. In 2023, primary market supply grew 26% year-over-year to 5,174.1 MW. An all-time high of 3,077.8 MW was under construction in primary markets, a 46% year-over-year increase. This growth trajectory is not showing any signs of slowing down, as the United States data center market size is estimated to reach 24.11 thousand MW by 2029, growing at a compound annual growth rate (CAGR) of 10.24% during the forecast period (2024-2029).

Preleasing activity in primary markets is strengthening with 2,553.1 MW (83%) of the 3,077.8 MW under construction preleased. Cloud providers continue to lease most available power capacity, but artificial intelligence (AI) is also driving significant demand.

Power availability continued to influence data center operators' location decisions more than geography did.

The expansion is not just in capacity but also in sophistication. Data centers are increasingly investing in renewable energy sources and advanced cooling technologies to enhance efficiency and reduce environmental impact. The shift towards sustainable practices is becoming more pronounced as operators face rising operating costs due to fuel costs, taxes, and electricity rate increases in certain jurisdictions.

Artificial Intelligence (AI) is emerging as a significant driver



of demand for data center services. The revenue from generative AI software advancements is expected to increase at a 58% CAGR from 2023 to 2028. This burgeoning sector, along with the continued digitization of the economy, underscores the critical role that data centers play in supporting the infrastructure needs of modern businesses.

The data center industry's boom is a testament to the ever-growing digital economy's appetite for data processing and storage. As this sector continues to evolve, it will likely keep shaping the technological landscape of the United States and beyond.

Data centers, often referred to as the "brains" of the internet, play a crucial role in processing, storing, and transmitting the vast amount of data we rely on daily. These centers utilize various information technology (IT) devices, all powered by electricity.

According to a recent CBRE report, power availability continued to influence data center operators' location decisions more than geography did. From that perspective, Pennsylvania should be competitive in attracting this market.

In the realm of data centers, energy efficiency has become a paramount concern, given the substantial electricity consumption these facilities command. As the digital economy burgeons, so does the need for data centers to operate more sustainably and cost-effectively.

The power requirements for a data center can vary significantly depending on the scale and design of the facility, as well as the efficiency of its equipment. Small data centers, which span from 5,000 to 20,000 square feet and host between 500 and 2,000 servers, may only require 1 to 5 megawatts (MW) of power.

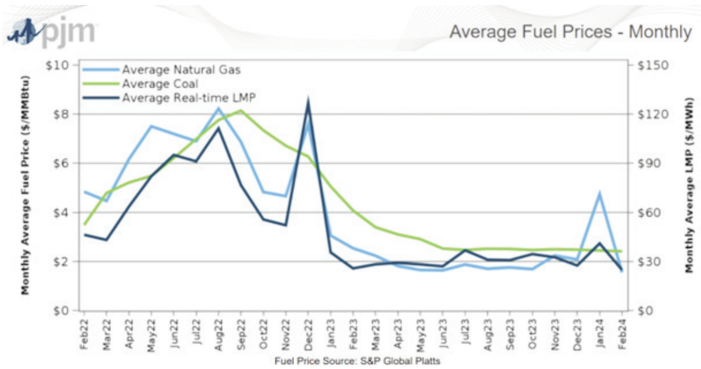
On the other hand, large 'hyperscale' data centers, ranging from 100,000 square feet to several millions of square feet, and accommodating tens of thousands of servers, can demand anywhere from 20 to over 100 megawatts (MW) of power.

Continued on page 4

Data Centers *Continued from page 3*

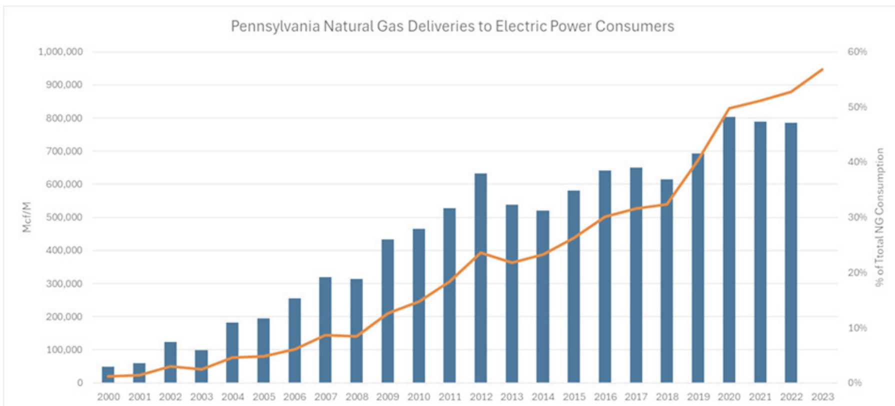
What will this market look like for Pennsylvania?

Right is the map of the current data centers in Pennsylvania and the Northeastern seaboard. While Pennsylvania has not seen the growth that other areas have, there has been an increase in both the eastern and western sides of the state.



There are several obstacles that the state must face to take advantage of this opportunity. One of the main challenges is the instability of the power market, which is consistently affected by changes in pricing. This is because all energy types are subject to bidding and purchasing on a regular basis. Additionally, there may be times when the system requires support from energy sources that are not economically feasible to produce. This is a direct result of the increasing impact of renewable energy on the power market.

Despite these challenges, natural gas has emerged as a more cost-effective fuel source than coal over the past two years. According to market projections provided by BG, this trend is expected to continue for the next two to three years.

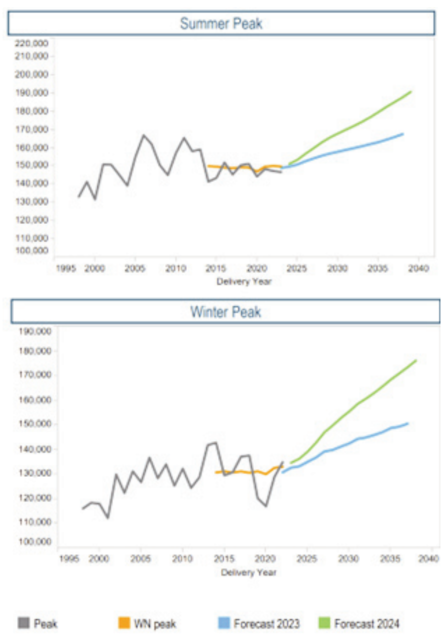


According to the PAPUC's Electric Power Outlook – Aug 2023, natural gas has provided approximately 55.2% of the total generation to the grid in 2022. In that report, Pennsylvania's natural gas-fired generation nameplate capacity is approximately 46.6%, meaning it is relied upon more often than other fuels.

The comparison to the natural gas market tells a similar story. According to the EIA, the power market is just under 50% of the total demand for the state.

Power demand has grown exponentially since 2000. Prior to 2005, power demand consumed less than 100,000 Mcf/m. The current market is nearly 10 times that amount.

And we're not done yet. Below is the PJM expected summer and winter total MW forecast to 2040. Historically there was only one peak period during the summer.



PJM now projects based on recent history, that there are peaks in both the summer and the winter, with the winter peak being only slightly lower than the summer one.

What does that mean for natural gas?

BG projects that natural gas delivered to power customers will nearly double from .7 Tcf in 2019 to 1.3 Tcf in 2040. This is assuming that natural gas provides the same 55% of total generation. We made that assumption to be conservative. We expect the percentage of gas-fired generation to grow slightly over the next 3-5 years until settling to between 40-50% around 2030.

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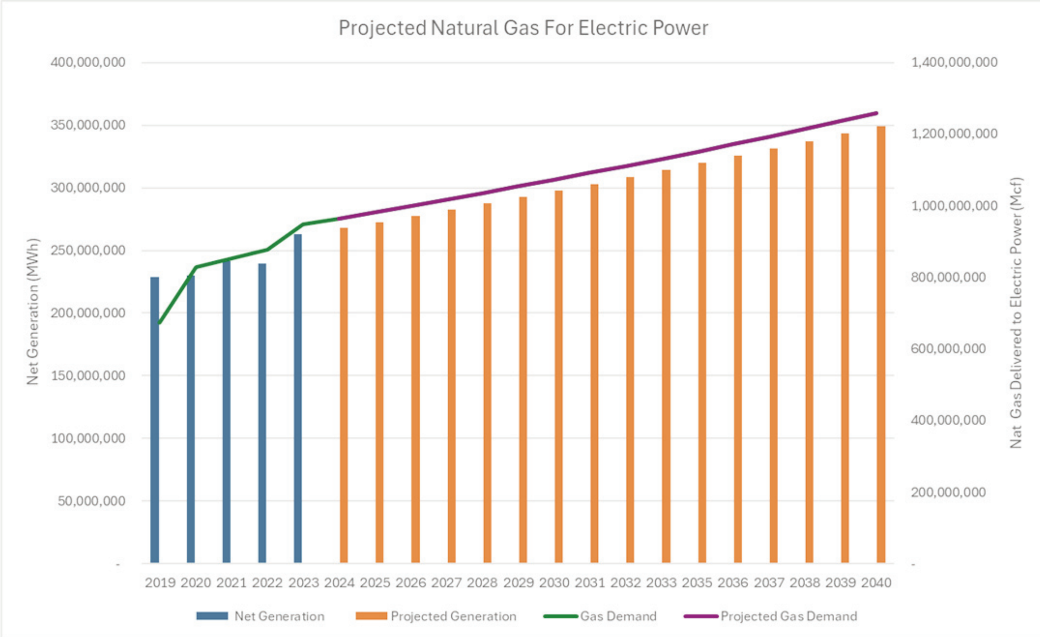
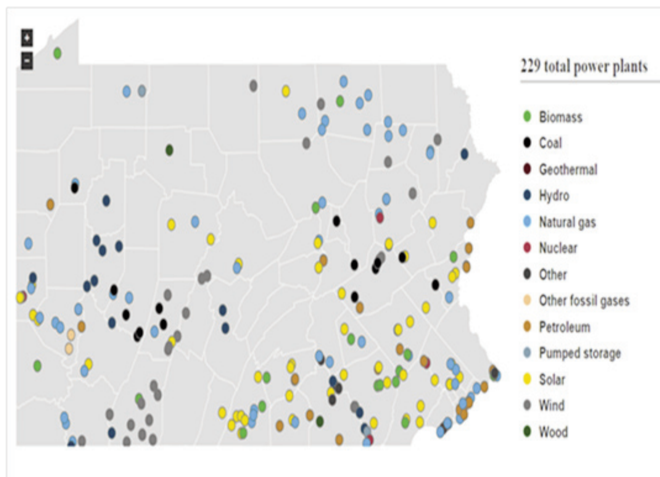


Where will the gas production come from?

It is expected that a major portion of the supply will have to be produced from southwestern Pennsylvania. As per the graphic below, there are more large power lines that can transmit power generation to the eastern part of the state. However, it should be noted that there is a significant amount of gas-fired generation in the northeastern part of the state. It is imperative that this power is retained within Pennsylvania and not exported.



The development of data centers faces a major hurdle in the form of inadequate infrastructure for gas and power. It is a challenge to deliver both gas and power to the Southeastern Pennsylvania region (SEPA). If more gas-fired generators are built in SEPA, the Southwest Pennsylvania region (SWPA) may face a shortage of pipeline capacity for natural gas. In addition, power generation in SWPA will also be limited due to regional requirements. To attract data centers and remain competitive with other states, we must invest in additional natural gas pipeline capacity, power transmission line development, and gas-fired generation in SEPA. Without these investments, we won't be able to compete with the eastern seaboard states. ■

Update provided by Kevin Moody, PIOGA General Counsel

PIOGA - VOC Update

DEP agrees to discuss Conventional VOC Regulation with conventional industry

On October 16, 2016, the EPA issued "Control Techniques Guidelines for the Oil and Natural Gas Industry" (October 16, 2016 "O&G CTG") to inform state environmental regulators' determinations of RACT ("reasonable available control technology") to mitigate emissions of volatile organic compounds (VOCs) that contribute to ozone formation. Over six (6) years later and more than five (5) years after DEP began the development of its VOC rulemaking applicable to VOC emission sources used in oil and natural gas production operations, DEP provided notice on Friday, December 2, 2022, that the emergency certified final-omitted Conventional VOC Regulation, #7-580, IRRC No. 3363, became effective without opportunity for public comment.

Three days later, on Monday, December 5, 2022, PIOGA joined with the state's two conventional oil and gas producers' associations (PGCC & PIPP) in filing a Commonwealth Court lawsuit (574 MD 2022) asserting that the Conventional VOC Regulation is unlawful because it was promulgated in violation of the legislative mandate in Section 7(b) of Act 52 of 2016:

> Future rulemaking — **Any rulemaking concerning conventional oil and gas wells** that the Environmental Quality Board undertakes after the effective date of this act shall be undertaken **separately and independently of unconventional wells** or other subjects and **shall include a regulatory analysis form** submitted to the Independent Regulatory Review Commission **that is restricted to the subject of conventional oil and gas wells.** (Emphasis added)

On January 4, 2023, DEP/EQB filed preliminary objections (POs) to our industry's lawsuit, and industry responded less than two (2) weeks later on January 17, 2023. Although briefing on the POs was completed three (3) months later, the Commonwealth Court did not decide the POs before the initial December 2, 2023, reporting deadline. Accordingly, the conventional industry asked DEP for an extension of that deadline for the following reasons:

- DEP has not yet prescribed the manner of reporting as required by §129.140(k)(2), including forms as required by the Regulatory Review Act,
- Most conventional oil and gas well operators do not have experience with federal Quad O/Oa reporting, and
- Conventional oil and gas well operators do not fully understand the technical aspects of the regulation or how data is to be documented and reported, for the reasons explained below.

In response to industry's request, DEP stated that it "intends to use enforcement discretion for the first annual report required by 25 Pa. Code § 129.140(k)(1), due on December 2, 2023. Enforcement discretion will extend through June 1, 2024."

The viability of this extended deadline was called into question by the court's April 16, 2024, decision overruling all four (4) of DEP/EQB's POs. While the court's reasons for rejecting the DEP/EQB POs are all important, the most significant is the court's determination that the conventional industry "advanced a viable interpretation that '[a]ny rulemaking concerning conventional oil and gas wells that the [EQB] undertakes' must be 'undertaken separately and independently of unconventional wells' in any statutory context." (Emphasis in original). DEP's position is that Section 7(b) of Act 52 of 2016 is wholly inapplicable to regulations, such as the Conventional VOC Regulation, promulgated under the Air Pollution Control Act.

The standards applicable to deciding POs required the court to find that any deference due the DEP/EQB position did not demonstrate "that their interpretation of Section 7(b) is so clear and free from doubt that" the conventional industry's challenge should be dismissed, especially in this case of first impression. The court's decision required DEP/EQB to answer industry's complaint (petition for review, or PFR) by May 16th.

In view of the court's rationale described above, DEP/EQB and the conventional industry agreed to ask the court to stay the litigation to enable discussions to settle the litigation. The court granted the request. As part of the stay, DEP stated it "will not be enforcing the regulation subject to this litigation." PIOGA's notice to members about this stay of enforcement is available at *https://pioga.org/dep-will-not-be-enforcing-the-voc-emission-rule/*.

It remains to be seen if this matter can be settled before the extended June 1, 2024, initial reporting deadline. The conventional industry views this as an opportunity for DEP and the conventional industry to engage in the process required by Act 52 for regulations "concerning conventional oil and gas wells."

PIOGA, PIPP and PGCC are represented in this litigation by Jean Mosites & Ed Phillips of Babst Calland's Pittsburgh office. ■

PIOGA's 2024 Events

A photo glimpse at some of the great PIOGA events this year!

You can find all PIOGA's Events at *https://pioga.org/events/pioga-events/* - and come join the fun and training(s)!

Check out some of the event photos below and make sure to visit the Photo Galleries section at pioga.org to view more photos! (https://pioga.org/about/photo-galleries/)

Vermont Governor Allows Nation's First Climate Change Cost Recovery Bill to Become Law Without Signature

6.3.24. Babst Calland (Environmental Alert) Jean M. Mosites and Gina Falaschi Buchman.

On May 30, 2024, Vermont Governor Philip Scott allowed S.259, An act relating to climate change cost recovery, to become law without his signature. S. 259, entitled the Climate Superfund Act, will require the development of claims to shift the cost of alleged climate-related impacts in Vermont onto the companies that produced fossil fuels responsible for greenhouse gas (GHG) emissions.

This bill is the first of its kind to become law in the United States, and similar legislation is pending in Massachusetts, New York, and Maryland. Borrowing some concepts from the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), or Superfund, which imposes strict liability for cleanup of contaminated sites on potentially responsible parties, this Act seeks to assign financial liability for climate-related impacts on the companies that extracted and refined petroleum products and other fossil fuels. Like CERCLA, the Act imposes retroactive liability on entities having conducted lawful business activities in the past.

Vermont's Act establishes a Climate Superfund Cost Recovery Program to be administered by the Climate Action Office of the Agency of Natural Resources. The Vermont Treasurer will be required to assess the cost of GHG emissions to the state and its residents during the period January 1, 1995 through December 31, 2024. The Agency of Natural Resources will apportion liability and make cost recovery demands to "Responsible Parties," those entities engaged in the trade or business of extracting fossil fuel or refining crude oil responsible for more than one billion metric tons of covered greenhouse gas emissions during the covered period.

Funds received from these companies will be deposited in the Climate Superfund Cost Recovery Program Fund and used for climate change adaptation projects. A Responsible Party's first payment would be due six months after the cost recovery demand is made and should be at least 20% of the total demand. Subsequent payments of not less than 10% of the total demand would be due annually thereafter until the entire demand is received.

The Act also requires the Agency of Natural Resources to submit a report to the General Assembly on or before January 15, 2025 regarding the feasibility of and progress towards implementing the requirements of the Act. The Agency will also be required to adopt rules implementing the Act. Rules regarding methodologies to identify Responsible Parties and determine their share of covered GHG emissions and requirements for registering entities that are responsible parties must be finalized by January 1, 2027. A rule for the adoption of a Resilience Implementation Strategy to identify and prioritize climate change adaptation projects and disperse funds must be finalized by January 1, 2026.

Instead of signing or vetoing the bill, the Governor allowed the bill to become law after five days and sent a letter to the Vermont General Assembly. This letter expressed his concerns that the $600,000 appropriated by the legislature to cover implementation of the Act would be inadequate to complete the required cost analysis, which he expects to meet significant scrutiny and legal challenges.

Legal challenges to both the law and any regulations promulgated pursuant to it are certainly expected. Challengers are likely to target the methodologies used to determine Responsible Parties, the limited scope of definition of Responsible Parties and the decision to hold what may be just a few companies liable for the entire impact of GHG emissions, and the lack of connection between the adaptation projects and the actions of the Responsible Parties.

It is also worth noting that the Climate Superfund Act is not the state's only active initiative to hold energy companies liable for their activities within the state. The state also filed a consumer protection lawsuit in Vermont state court in 2021 against a dozen oil companies, alleging deception and unfair business practices related to the sale of their products. Vermont v. Exxon Mobil Corp. (Vt. Super. Ct.). The defendant oil companies removed the case to federal district court in Vermont, but, like other similar lawsuits, it was ultimately remanded back to state court in February 2024. Vermont v. Exxon Mobil Corp., 2:21-cv-00260 (D. Vt.). In this litigation, Vermont seeks the defendants to "disgorge all funds acquired and/or retained as a result of any acts or practices found to be unlawful," among other relief sought. ■

Babst Calland continues to track climate change legislation and litigation, as well as federal and state regulatory developments. For more information on this and other climate change-related matters, please contact Jean M. Mosites at (412) 394-6468 or jmosites@babstcalland.com.

Is Your Company Prepared for the Methane Emissions Charge?

5.8.24. Schneider Downs (Energy & Resource) Logan Kowcheck.

Link: https://schneiderdowns.com/our-thoughts-on/methane-emissions-charge/

The Environmental Protection Agency (EPA) has published a rule to assess and collect billions of dollars in methane "waste emissions charges (WEC)" from the oil and gas sector. The rule implements section 60113 of the Inflation Reduction Act of 2022 (IRA) which gives the EPA the power to act as tax assessor, collector and enforcer.

The WEC is imposed on methane emissions at facilities that emit more than 25,000 metric tons of carbon dioxide equivalent (CO2e), as reported in Subpart W of the EPA's Greenhouse Gas Reporting Program in the **1.)** Onshore and offshore production sector; **2.)** The onshore natural gas gathering and boosting, processing, transmission and storage sector; and **3.)** The liquified natural gas (LNG) storage export and import sector. The final rule of Subpart W is set to be released in August 2024 with methodology changes for calculations and new emissions sources being added to the regulation.

The IRA WEC increases 66% by 2026:

- $900/metric ton of methane in 2024 (equates to - $36/metric ton of CO2)
- $1,200/metric ton of methane in 2025
- $1,500/metric ton of methane in 2026+

Companies need to evaluate key criteria when implementing the WEC:

- Determining what a facility is under the IRA.
- What is the prescribed calculation to determine how much it will cost?
- How are you monitoring methane emissions on a facility or asset level? The regulatory push is towards continuous/real-time empirical measurement.
- How will you differentiate emissions reported at a basin level versus facilities versus individual assets? If emissions are reported at a basin or facility level, how do you allocate?
- Can you use volumes as an allocation basis?
- Are you billing monthly through your joint-interest-billing account or when paid?
- If you are a non-operator, how will you determine the amount to charge monthly if the operator is charging on an annual basis?
- How will the related-party aggregation rules impact your calculations?
- Could your transportation or storage partner share in the cost if there are capacity constraints that require flaring?

How could this charge impact valuations in mergers and acquisitions?

The IRA has other key changes that will impact rules that have not been updated since the 1950s. Below is a list of other changes based on the IRA:

Term	Regulations Prior to IRA	IRA-Required Changes (Currently Being Implemented)	Proposed Regulations
Royalty	Minimum of 12.5% (43 CFR 3103.3 1(a)(2))	16.67% for 10 years. Minimum of 16.67% after 8/16/2032. (IRA Sec. 50262)	16.67% for 10 years. Minimum of 16.67% after 8/16/2032.
Rental	$1.50 per acre for the first 5 years of the lease term and $2 per acre for any subsequent year (43 CFR 3103.2 2(a))	$3.00 per acre for the first 2 years; $5.00 per acre for lease years 3 through 8; and $15.00 per acre thereafter. Applies for 10 years. Minimum after 8/16/2032. (IRA Sec. 50262)	$3.00 per acre for the first 2 years; $5.00 per acre for lease years 3 through 8; and $15.00 per acre thereafter. **Adjust for inflation after 8/16/2032.**
Minimum Bonus Bid	$2 per acre or fraction thereof (43 CFR 3120.1 2(c))	$10 per acre for 10 years. Minimum after 8/16/2032. (IRA Sec. 50262)	$10 per acre. **Adjust for inflation after 8/16/2032.**
Expressions of Interest (EOI)	Does not exist.	Nonrefundable filing fee of $5 per acre. (IRA Sec. 50262) Ties wind and solar energy rights-of-way to oil and gas leasing. (IRA Sec. 50265)	Nonrefundable filing fee of $5 per acre. **Due at time of EOI submission.** Ties wind and solar energy rights-of-way to oil and gas leasing.
Class II Reinstatements	Available to all types of leases. *Royalty*: Not less than 16.67 %. *Rental*: $10 per acre, or fraction thereof.	Limited to competitive leases and noncompetitive acquired leases. *Royalty*: Not less than 20%. *Rental*: $20 per acre, or fraction thereof. (IRA Sec. 50262)	Limited to competitive leases. **Will not apply to leases on acquired land.** *Royalty*: Not less than 20%. *Rental*: $20 per acre, or fraction thereof. **Adjusted for inflation.**
Noncompetitive leasing	Various provisions implementing the previous statutory authority.	Eliminated statutory authority. (IRA Sec. 50262)	Eliminate 43 CFR 3110.

The IRA is expected to have significant impacts on the monitoring and remitting of information related to methane emissions that are already in effect for 2024.

You should begin assessing how the IRA will impact your company and implement necessary changes to comply with the new rules. In addition, continue monitoring the changes that are expected to be released during 2024. If you have questions as you are evaluating the impact the IRA has on your company, reach out to a Schneider Downs expert. ■

Federal energy policies impact Pennsylvania

5.2.24. Published by Penn Live. Opinion Piece written by Stephanie Catarino Wissman, American Petroleum Institute Pa.

As Pennsylvanians continue to face growing inflation and the economic pressure that comes with it, we need our policymakers to start taking action to help secure our financial future, as discussed in “Higher gas and rents keep US inflation elevated, likely delaying Fed rate cuts” (April 10 - Pennlive.com)

That work ought to start in Washington and fast. Given that energy access is key to almost every industry’s success, federal policies that support increased oil and natural gas development can help put downward pressure on consumer costs for energy and related products. This could have a real impact on American families and businesses.

But the Biden administration has been advocating for anti-oil and natural gas policies that jeopardize our energy future. It all started with years of policies that removed land for oil and natural gas development, increased costs of production, and created unnecessary roadblocks to new development. Things got worse when the president announced a pause on new liquefied natural gas projects that could hurt our economy and our allies.

The systematic push against U.S. natural gas and oil development risks good American jobs, critical allies abroad and a future where we don’t have enough affordable energy to support our communities.

Instead, we would do well to harness our history: Pennsylvania is a proud energy-producing state that has long seen the benefits of natural gas and oil for economic development. Leaders in Washington should follow the Keystone State’s lead and bolster America’s energy future. ■

Link to full article:www.pennlive.com/opinion/2024/05/federal-energy-policies-impact-pennsylvania-pennlive-letters.html

A Sad Loss for the Oil and Gas Industry

A tribute to Kenneth Komoroski

Ken was instrumental in the growth of IOGA of PA from a small organization to a respected voice and advocate for the conventional oil and natural gas industry after the enactment of the 1984 Oil and Gas Act.

Ken was one of a number of attorneys who provided necessary legal advice, counsel and litigation services to IOGA and its members when the rules and practices governing our industry were being developed.

Most recently Ken provided the benefits of his vast legal experience and regulatory knowledge by authoring many articles for the PIOGA Press providing practical information on various subjects of interest to our members. Ken was a tireless supporter of our industry and will be truly missed.

Link to full obituary: https://obituaries.post-gazette.com/obituary/kenneth-stanley-komoroski-1089596926

PIOGA Pennsylvania Independent Oil & Gas Association PIOGATech PIOGA's Technical Seminar Series

PIOGATech: Pipeline Compliance

The Environmental and Safety Committees co-hosted a PIOGATech on May 21st on pipeline compliance which included Operator Qualifications, PHMSA, and current regulations. The in-person training brought together close to 50 industry professionals that were engaged in learning, sharing ideas and asking questions of our presenters.

The technical training featured speakers from Babst Calland, Apex Pipeline Services, Diversified Energy Company, CNX Resources Corp. and CleanAir Engineering. In-depth discussions occurred with our guests and Keith Coyle of Babst Calland regarding Federal and State regulations, gas pipelines and hazardous liquid pipelines. Our second presenter, Jason Porter of Apex Pipeline Services dove into Operator Qualifications in a 2-part session. The third speaker, Shawn Bailey taught our group about Pipeline Emissions, PHMSA NPRM and a discussion on leak detection. The day finished with Jim Locke of CNX Resources diving into CNX's Radical Transparency on air quality monitoring and Doug Goetz further explaining CleanAir Engineering's role in air quality monitoring. Our attendees were able to earn their Continuing Education Units and Professional Development Hours Certificate for this 5-hour class.

Our special thanks go out to all the presenters and to our planning partners that included Angleo Albanese from Diversified Energy Co. and Wayne Vanderhoof from RJR Safety, Inc., Keith Coyle from Babst Calland, Jason Porter from Apex Pipeline Services, Shawn Bailey from Diversified Energy Co., Jim Locke from CNX Resources Corp, and Doug Goetz from CleanAir Engineering, Inc. Save the date for our Water & Waste Management training on September 12 and our annual Air Quality Compliance in December.

Keith Coyle
Babst Calland

Jason Porter
Apex Pipeline Services

Shawn Bailey
Diversified Energy Co

Jim Locke, CNX
Doug Goetz, CleanAir

Can Pennsylvania Afford a Green Transition in Energy?

4.23.24. Delaware Valley Journal. Opinion Piece by David Marks.

The energy landscape in Pennsylvania is rich. We've taken advantage of our huge coal and natural gas resources for more than a century. More recently, prolific gas production has ensured low heating and power generation costs in Pennsylvania for years. But the transition to a 'green' economy could stop this progress with clean coal and gas-fired generation, and could mean giving up our natural gas appliances too.

The energy industry in Pennsylvania has served us well. Pennsylvania homes and businesses enjoy energy low prices and good energy jobs. But now this is being threatened with bad science and misguided politicians.

First, some facts –

- Pennsylvania is the nation's second-largest natural gas producer after Texas, producing more than 7½ trillion cubic feet each year.

- Pennsylvania is the third-largest coal-producing state, and it's the second-largest coal exporter to foreign markets.

- Pennsylvania ranked second after Illinois in electricity generation from nuclear power. And since 2019, natural gas has surpassed nuclear energy as the largest source of in-state electricity generation.

- Over half of Pennsylvania households use natural gas as heating fuel; and the state's 49 gas storage sites — the most for any state – help meet winter demand for the Mid-Atlantic and New England.

- Pennsylvania is the second-largest net supplier, after Texas, of total energy to other states.

Pennsylvania's fossil fuel industry has been important to our nation – in the past, now, and in our nation's future.

Today, we also demand that we are better stewards of the environment. Industry has delivered with improved manufacturing methods and more efficient infrastructure. The EPA reports that, since 1980, carbon monoxide emissions are down by more than 74%. Nitrogen dioxide emissions have been reduced by more than 70%. Sulfur dioxide emissions are off 93%. And carbon dioxide emissions – CO_2 – for all vehicles during the same period – have fallen by 31% – and still trending down.

President Biden is pushing a transition to a green economy. But the EPA says we are getting greener without borrowing trillions of dollars. I was always taught If it ain't broke, don't fix it. Don't force Electric Vehicles on us. Let us choose what works best now, while we improve on technology for the future.

Biden says green industries can deliver jobs. But running gas-fired power plants and refineries requires many workers. How many jobs would Pennsylvania lose under Biden's Inflation Reduction Act, which, by the way has only increased inflation? Biden's plan hopes to create more than 200,000 jobs over the next ten years in Pennsylvania. What Biden doesn't tell you is that the good jobs in natural gas and coal go away, to be replaced with taxpayer-subsidized energy justice jobs and environmental justice jobs, whatever that means.

President Biden visited the Philadelphia shipyard to talk about energy jobs, and one particular ship's components will be built by nine unions across the country. How do temporary jobs in Philadelphia help develop energy jobs across Pennsylvania? Biden hopes that workers who lose their jobs in the transition will find a place in the green economy. But the EV industry, as an example, is a net job loser for us, and a net job gainer for China.

Can Biden's Inflation Reduction Act produce as many jobs as those we'll lose? If your job that is connected with natural gas or coal, or if your job depends on Pennsylvania minerals for manufacturing, then you can understand the damage that will be done if Mr. Biden phases out gas and coal. You see, after the equipment is built and installed, solar and wind almost runs itself. Job losses naturally follow.

According to the DoE, energy jobs in the U.S. grew by 3.8 percent in 2022, half of them being green energy jobs. But remember – once it's installed, most of the work goes away. The green economy can't replace job losses from refineries and power plants that require 24-hour, 365-day staffing. And it cannot deliver the same reliable energy! The wind doesn't always blow and the sun isn't always shining.

Thousands of Pennsylvania families have, for generations, made a living in oil and gas and coal. Now Joe Biden wants to end these jobs and tell workers to find jobs elsewhere. This delivers serious headwinds to energy with the green transition. American companies cannot compete with cheap labor in China, which dominates the solar panel business.

I said in the beginning that I would tell you what we need to best develop energy here in Pennsylvania. We need Donald Trump. Donald Trump understands energy and real job creation. He understands competition, and American ingenuity that produces energy from all sources – in a cleaner, and less expensive way. ■

delawarevalleyjournal.com/marks-can-pennsylvania-afford-a-green-transition-in-energy/

On future power demand

Hypocrisy: Big Data Hates Natural Gas Until It Needs.... A Lot of it.

Reality Check: A January 2024 report from the International Energy Agency noted that electricity usage worldwide by high-demand data centers and cryptocurrency mining in a worst-case scenario model were expected to double from 460TWh in 2022 to over 1,000TWh by 2026. And that's just the beginning.

Click HERE to download/print – ***Hypocrisy: Big Data Hates Natural Gas Until It Needs.... A Lot of it.*** *(https://pioga.org/reality-check-on-future-power-demand/)*

To read more from this Reality Check – and to share it with friends and colleagues – visit the Latest News and Blog section at **pioga.org*.***

MAY 2024

Reality Check

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PIOGA Pennsylvania Independent Oil & Gas Association

On future power demand

Hypocrisy: Big Data Hates Natural Gas Until It Needs...A Lot of It.

While climate-change activists and some elected officials hail the retirement of U.S. coal-fired power plants – about 35.5 gigawatts (GW) between 2022-2025 alone – professionals responsible for keeping the lights on are sounding the alarm about future demand for electricity, with a primary driver being data centers, computer chip manufacturers, and battery and electric vehicle factories.

Among the examples:

+ Georgia Power announced last month that new demand could grow by 7,100 megawatts (MW) in the summer through 2031, 28 times more than projected about two years ago, with winter demand jumping 17-fold during the same time. The company notes that the state's success in attracting dozens of electric vehicle, battery, and clean energy manufacturing projects and data centers – all demanding significantly more electricity than most industrial users - is behind the substantial increases.

+ Meanwhile, the strain on the electric grid from new and planned data centers is playing out in central Ohio, where huge projects by Intel, Amazon, Facebook and Google were initially drawn to the region's affordable and reliable electricity. That luxury was fleeting, however, as reported by JLL, a tech-focused commercial real estate firm, which noted that the expansion of data centers by nearly 150 percent between 2012-2021 had consumed much of AEP Ohio's surplus power.

+ A microchip manufacturing energy challenge focuses on Micron Technology, Inc.'s 2022 announcement to build the largest semiconductor plant in U.S. history in Onondaga County, New York, promised to be powered by 100 percent renewable energy. The facility boasts the potential of 9,000 direct positions at Micron and 50,000 additional jobs, with an investment of more than $100 billion over 20-plus years.

  The problem, according to the Empire Center for Public Policy think tank, is that Micron's completed facilities will consume as much electricity as that required by New Hampshire and Vermont combined. Based on the policy center's assessment, sources for 90 percent of that renewable supply have yet to be determined.

+ Closer to home in Pennsylvania, Amazon Web Services' $650 million purchase of Talen Energy's 960 MW data center campus in Salem Township, Luzerne County last month included added electricity security: it will be powered directly by Talen's adjacent Susquehanna Steam Electric Station, which generates 2.5 GW of nuclear energy. Following the sale, Talen's president and chief executive officer noted in a call with investors, "as power demand continues to rise worldwide, data centers are at the heart of that growth."

PIOGA Members in the Community

PIOGA is looking for more ***Members in the Community*** feature stories! If you are a PIOGA member and have a positive community story to share - please reach out to meghan@pioga.org.

We are looking for stories of community impact - education programs, volunteering, positive industry outreach, donations, etc.

It is time to showcase all the good in our industry and shed light on the positives! These feature stories/articles will be used in PIOGA's social media and future marketing materials!

If you have any questions or suggestions for articles - please reach out! Together we can educate and promote the Oil & Gas industry!

PIOGA Pennsylvania Independent Oil & Gas Association

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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: bakerhughesrig-count.gcs-web.com/na-rig-count
NYMEX strip chart: Mid American Natural Resources
Basis futures values: BHE Eastern Energy Field Services

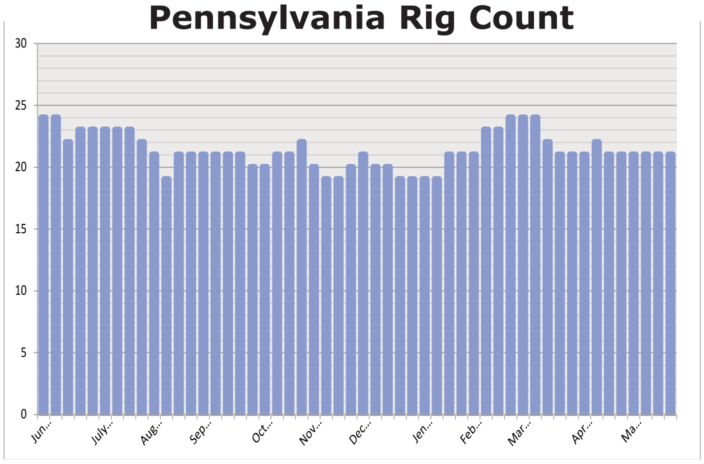
Penn Grade Crude Oil Prices

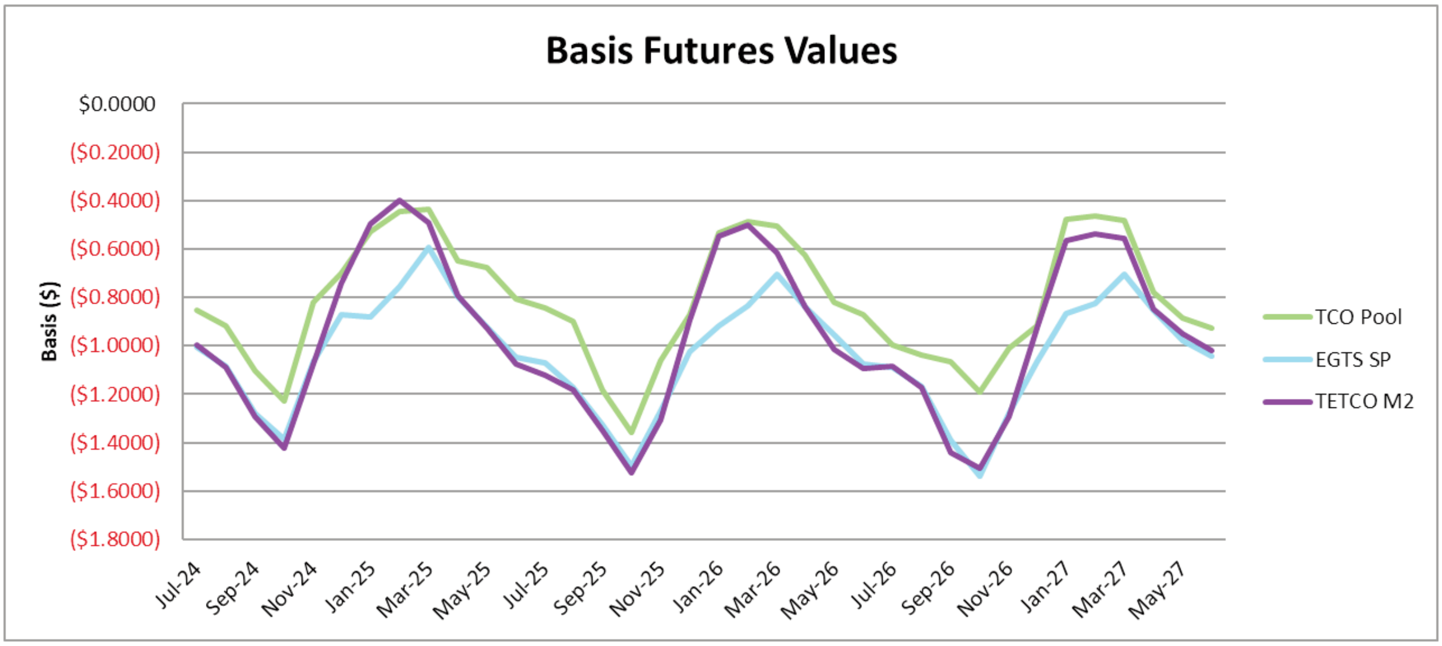
Natural Gas Futures Closing Prices

July 2024	2.821
August	2.892
September	2.872
October	2.950
November	3.265
December	3.673
January 2025	3.926
February	3.758
March	3.366
April	3.125

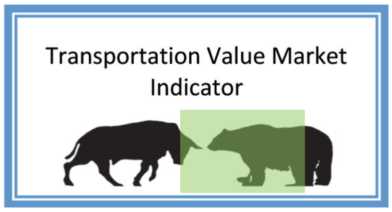
Prices as of June 7, 2024

Pennsylvania Rig Count





Northeast Pricing Report — June 2024

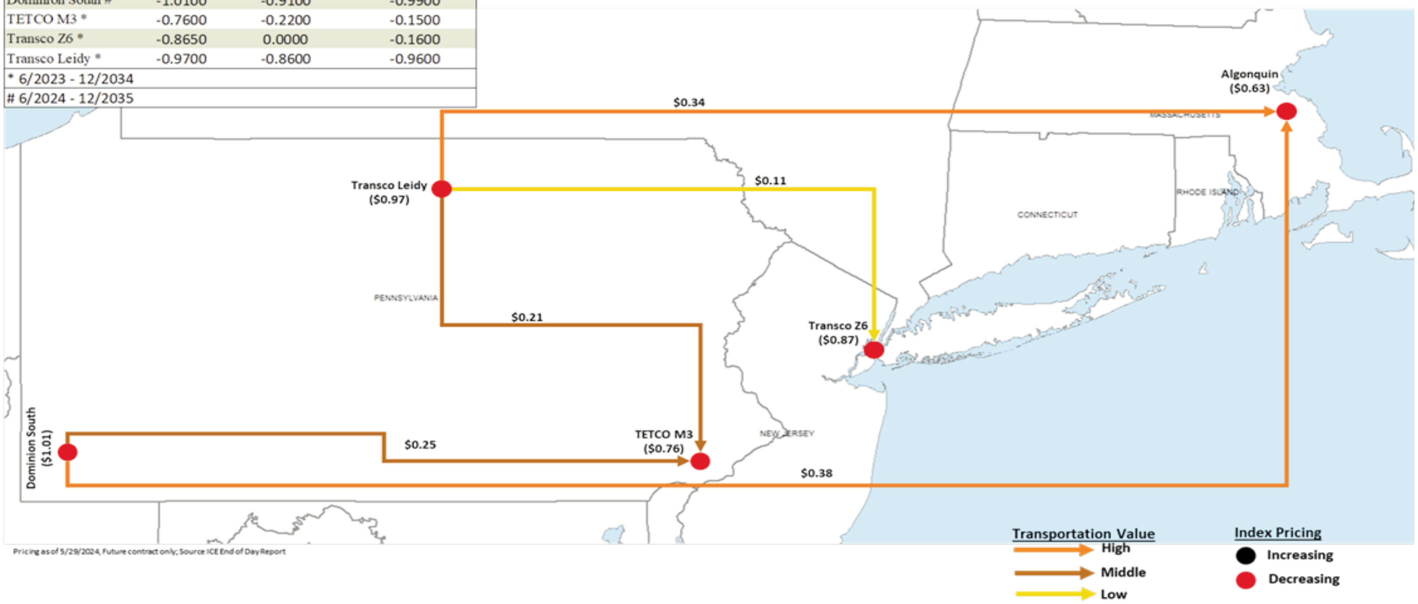


Provided by Bertison-George, LLC
www.bertison-george.com

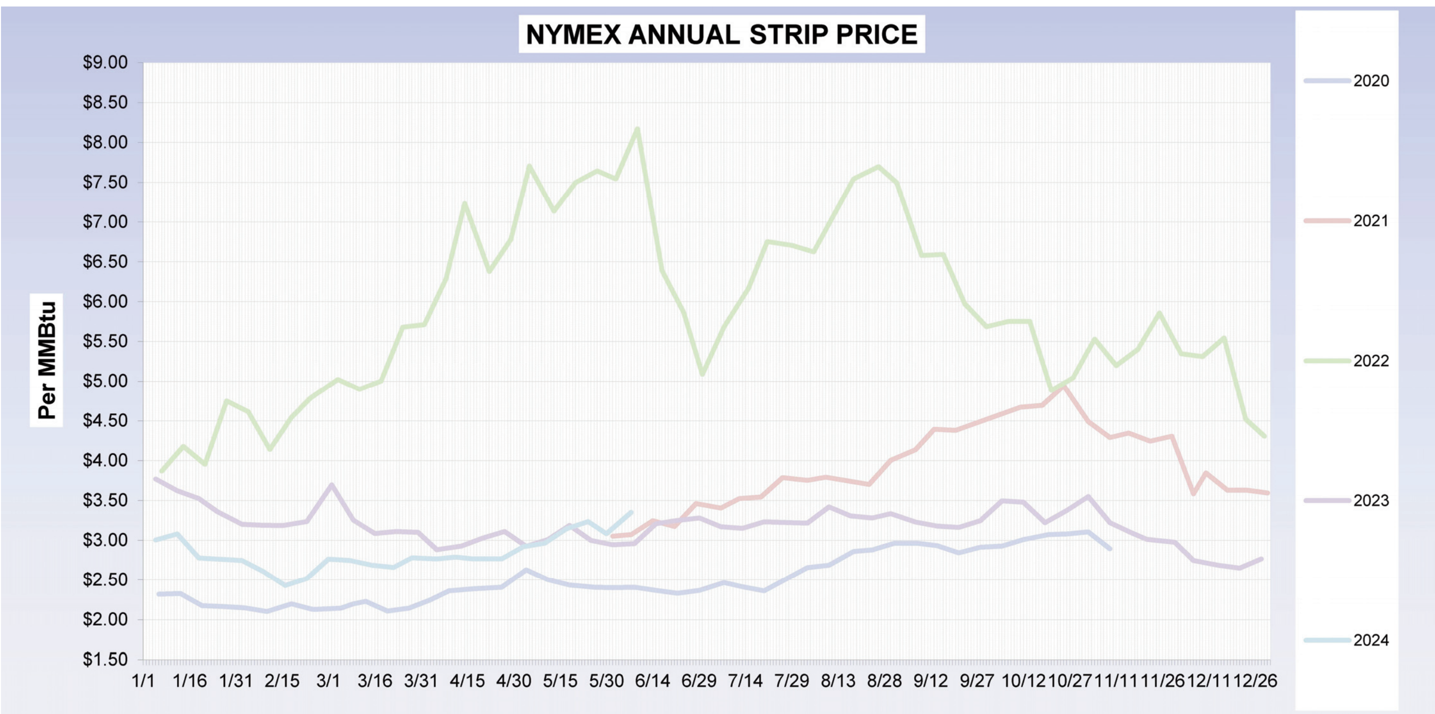
Gas stocks are currently at 2,795 billion cubic feet, 15% higher than last year and 26% above the five-year average. This has raised concerns about having too much supply. While gas output in the Lower 48 U.S. states decreased a bit in May compared to April, it has been increasing recently. The recent sell-off suggests that traders are looking for new long positions to counter the ongoing selling pressure. The current market situation suggests a cautious outlook for natural gas futures. Higher production poses a bearish risk, so the market needs solid support before a bullish trend can emerge. Traders should monitor signs of stabilization and increased demand as temperatures rise in the coming weeks. The Northeast basis points have all seen significant decreases from the beginning of May.

Most of the values for transportation have increased. Dominion South to Algonquin rose by $0.38 per MMBtu, while Transco Leidy to Algonquin has grown by another $0.34 per MMBtu compared to last month. The value for Transco Leidy to Transco Z6 and TETCO M3 to Transco Z6 increased by $0.11 and $0.21 per MMBtu, respectively. Dominion South to TETCO M3 rose by $0.25 Per MMBtu.

Natural Gas Basis Future Pricing ($/MMBtu)			
	Pricing Term		
Location	6/2024	6/2024-5/2025	6/2024-12/2029
Algonquin	-0.6300	1.9700	2.1400
Dominion South #	-1.0100	-0.9100	-0.9900
TETCO M3 *	-0.7600	-0.2200	-0.1500
Transco Z6 *	-0.8650	0.0000	-0.1600
Transco Leidy *	-0.9700	-0.8600	-0.9600
* 6/2023 - 12/2034			
# 6/2024 - 12/2035			



Pricing as of 5/29/2024, Future contract only; Source ICE End of Day Report



Spud Report: May

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 Operator indicates a conventional well.

Operator	Wells	Date	API#	County	Municipality
Anderson Energy SVC LLC *		5/30/24	123-48773	Warren	Brokenstraw
Cameron Energy Co *	2	5/20/24	053-31116	Forest	Howe Twp
		5/30/24	053-31115	Forest	Howe Twp
Chesapeake Appalachia	5	5/6/24	015-23918	Bradford	Terry Twp
		5/6/24	015-23919	Bradford	Terry Twp
		5/6/24	015-23920	Bradford	Terry Twp
		5/6/24	015-23916	Bradford	Terry Twp
		5/7/24	015-23917	Bradford	Terry Twp
Coterra Energy	3	5/8/24	115-23173	Susquehanna	Harford
		5/8/24	115-23174	Susquehanna	Harford
		5/8/24	115-23175	Susquehanna	Harford
EQT Prod Co	6	5/16/24	059-28355	Greene	Gilmore Twp
		5/17/24	059-28356	Greene	Gilmore Twp
		5/18/24	059-28357	Greene	Gilmore Twp
		5/20/24	059-28360	Greene	Gilmore Twp
		5/21/24	059-28359	Greene	Gilmore Twp
		5/22/24	059-28358	Greene	Gilmore Twp
Evergreen Resource		5/3/24	123-48906	Warren	Pleasant
Gas & Oil Mgmt Assn. *	3	5/1/24	123-48836	Warren	Pleasant
		5/14/24	123-48835	Warren	Pleasant
		5/24/24	123-48854	Warren	Pleasant
Mead Oil LLC *	2	5/14/24	123-48904	Warren	Cherry Grove
		5/6/24	123-48903	Warren	Sheffield
Pennhills Resources	5	5/1/24	053-31070	Forest	Howe Twp
		5/3/24	053-31086	Forest	Howe Twp
		5/8/24	053-31088	Forest	Howe Twp
		5/14/24	053-31083	Forest	Howe Twp
		5/20/24	053-31084	Forest	Howe Twp
Range Resources	10	5/2/24	125-29120	Washington	Chartiers
		5/3/24	125-29117	Washington	Chartiers
		5/3/24	125-29118	Washington	Chartiers
		5/4/24	125-29119	Washington	Chartiers
		5/15/24	125-29123	Washington	Jefferson
		5/15/24	125-29124	Washington	Jefferson
		5/16/24	125-29127	Washington	Jefferson
		5/16/24	125-29122	Washington	Jefferson
		5/16/24	125-29125	Washington	Jefferson
		5/16/24	125-29126	Washington	Jefferson
Scorpio Energy Inc. *		5/8/24	053-31042	Forest	Howe Twp
Snyder Bros Inc.	8	5/22/24	005-31498	Armstrong	Valley Twp
		5/22/24	005-31499	Armstrong	Valley Twp
		5/23/24	005-31500	Armstrong	Valley Twp
		5/24/24	005-31501	Armstrong	Valley Twp
		5/28/24	005-31502	Armstrong	Valley Twp
		5/28/24	005-31503	Armstrong	Valley Twp
		5/29/24	005-31504	Armstrong	Valley Twp
		5/30/24	005-31505	Armstrong	Valley Twp

	May	April	March	Feb	Jan
Total Wells	**47**	**35**	**37**	**40**	**48**
Unconventional Gas	32	16	29	34	37
Conventional Gas	0	0	0	0	1
Oil	10	17	5	4	1
Combination Oil/Gas	5	2	3	2	10

New PIOGA Membership Category - Gas Storage Operator

PIOGA has a new Membership Category - Gas Storage Operator!

If you are an individual or business entity engaged in the storage of natural gas with the Commonwealth of Pennsylvania - you can now join PIOGA!

Any current PIOGA members who know anyone in the gas storage operations sector, please share the news! Help PIOGA increase our membership and get more industry operators involved!

Storage members are entitled to vote.

For information on the new gas storage operator membership, dues and other memberships, visit: https://pioga.org/about/membership-and-benefits/

Calendar

PIOGA events

Information: www.pioga.org > PIOGA Events

PIOGA's Producers Golf Outing
July 25. Pennhills Club. Bradford, Pa.

PIOGA's Annual Divot Digger Golf Outing
August 22. Tam O'Shanter. Hermitage, Pa.

PIOGA's Birds & BBQ Clay Shoot
September 18. West Penn Sportsmen' Club. Murrysville, Pa.

Other events

The Appalachian STEPS Network Quarterly Meeting
August 8
(https://pioga.org/event/the-appalachian-steps-network-quarterly-meeting-piogas-safety-committee-meeting-2/)

Full Calendar - PIOGA Event & Meeting Schedule -
https://pioga.org/event/pioga-event-and-meeting-schedule-2024/

PIOGA Members and Industry Partners - Please email meghan@pioga.org to advertise upcoming events.

New PIOGA members Welcome!

Jackson Energy LLC
Rob Jackson
230 Winters Rd. Butler, PA 16002
Allies & Provider (returning)

M&A Resources
Chris Church
159 Perry Highway, STE 106. Pittburgh, PA 15229
Allies & Provider

Pennsylvania Independent Oil & Gas Association

100 Allegheny Drive, Suite 104. Warrendale, PA 15086
724-933-7306 • www.pioga.org

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

Oil Region Office (Meghan Keely)
304 East Bissell Ave., Oil City, PA 16301
814-671-2484

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