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House of Representatives
COMMONWEALTH OF PENNSYLVANIA
HARRISBURG

HOUSE DEMOCRATIC POLICY COMMITTEE HEARING
Topic: Marcellus Shale Severance Tax
418 Main Capitol Building – Harrisburg, PA
May 22, 2017

AGENDA

10:00 a.m. Welcome and Opening Remarks

10:10 a.m. Panel One:
- Dennis Davin, Secretary, PA Department of Community and Economic Development
- Patrick McDonnell, Acting Secretary, PA Department of Environmental Protection

10:25 a.m. Questions from Committee Members

10:40 a.m. Panel Two:
- Gladys Brown, Chairman, PA Public Utility Commission
- Matthew Knittel, Director, Independent Fiscal Office

10:55 a.m. Questions from Committee Members

11:10 a.m. Panel Three:
- Jim Welty, Vice President of Government Affairs, Marcellus Shale Coalition
- Todd Stager, Associate Vice President, Pennoni
- Kevin Sunday, Director of Government Affairs, PA Chamber of Business and Industry

11:35 a.m. Questions from Committee Members

11:50 a.m. Panel Four:
- Rob Altenburg, Director, PennFuture Energy Center
- Thomas Au, Conservation Chair, Sierra Club – PA Chapter

12:05 p.m. Questions from Committee Members

12:20 p.m. Closing Remarks

House Democratic Policy Committee
Public Hearing on Marcellus Shale Severance Tax
May 22, 2017

Good morning Chairman Sturla and members of the House Democratic Policy Committee.

My name is Dennis Davin and I am the Secretary of the Department of Community and Economic Development (DCED). I want to introduce Patrick McDonnell, Acting Secretary, Pennsylvania Department of Environmental Protection, who will assist me in answering questions after my remarks.

I appreciate the opportunity to provide testimony today concerning a Marcellus Shale severance tax.

A fair severance tax is a core component of responsible shale development – and it is as important to the long-term growth of the natural gas industry as pipeline networks and downstream economic development like cracker plants and manufacturing facilities.

A fair severance tax dedicated to a specific and politically important set of public goods will ensure that long term benefits to Pennsylvanians are realized.

We are at a critical inflection point with the Marcellus and Utica shale resource. It is a massive resource – the third largest natural gas basin in the world behind Qatar and Russia - and the eyes of the world are on ***US***. Why? Because others – both domestically and globally – are trying to figure out how to pipe our natural gas and natural gas liquids to other places to utilize the resources for their own benefit.

This production is prolific. Most of the natural gas and natural gas liquids that will be transported via several large pipeline projects currently being planned bypass the commonwealth entirely and will transport our resources to other domestic and international markets with much larger buying power.

We estimate that by 2025, **75%** of natural gas from these basins will be **exported from our borders.** Pennsylvania will be a net exporter of natural gas. The Marcellus will be the main source of new U.S. gas supply and we will help to fuel the nation. Beyond that, we will then likely help to fuel the world.

For example, Williams' Atlantic Sunrise pipeline project will deliver natural gas to the southeastern United States and to international markets. Sunoco Logistics' Mariner East 1 pipeline project is currently delivering ethane to Norway.

Is it sufficient for Pennsylvania's massive role in a national and global energy economy to be supported only through the imposition of an impact fee, when the reality is that companies make economic gains by providing other states and countries with our natural resources because they do not have them within their own borders?

Do we want or expect Pennsylvanian's to make that sacrifice for the approximately $200 million per year we collect in impact fees?

If Pennsylvanian's are truly to benefit from that profound role, we should have a fair severance tax.

Contracting with end-use markets that have high demand is necessary to develop and fund large pipeline infrastructure projects. However, we cannot ignore the fact that as producers are inking lucrative contracts for the sale of natural gas and natural gas liquids sourced from the Keystone State to markets outside of our borders, they also vigorously oppose a severance tax on the resource.

Nowhere is this situation more profound than ExxonMobil's recent announcement of $20 billion in investment in petrochemical facilities along the Gulf Coast. This investment comes along with an estimated 120,000 jobs in Texas using Pennsylvania's natural gas liquids.

The Wolf administration understands that the current low cost of natural gas has created a difficult economic environment for producers of Marcellus Shale natural gas and natural gas liquids. Prolific Marcellus wells have been bottlenecked for several years due to lack of pipeline infrastructure but in a relatively short time frame, new transmission line projects will be constructed to relieve capacity issues. There are currently more than $12 billion in transmission pipeline projects proposed for the Marcellus Shale that will transport our state's resource to national and international markets.

We believe this will ultimately result in higher realized gas prices for Marcellus shale producers. Their low-cost environment – which substantiates a critical and important basis for opposition – will very soon be an argument of the past.

Recent Energy Information Agency (EIA) statistics support our argument that there is a short-term issue with regard to natural gas prices:

- Pennsylvania and Ohio had the two largest annual natural gas production increases from 2015 to 2016, up 1.2 billion cubic feet per day each, reflecting higher production from the Utica and Marcellus shale plays, which have accounted for 85% of the U.S. shale gas production growth since 2012.

- The increased productivity of natural gas wells in the Marcellus Shale and Utica Shale is a result of ongoing improvements in precision and efficiency of horizontal drilling and hydraulic fracturing occurring in these regions.

- Production in Pennsylvania and Ohio has accounted for an increasing share of total U.S. natural gas production in recent years, growing from less than 2% in 2006 to 24% in 2016.

- Pennsylvania surpassed Louisiana in 2013 to become the second-highest natural gas producing state, behind Texas.

- EIA's *Short-Term Energy Outlook* projects that total U.S. natural gas production will increase in both 2017 and 2018 as natural gas prices rise, resulting in higher rig activity.

A recent IHS Markit report released by the Team Pennsylvania Foundation forecasts that through 2030, natural-gas production in Pennsylvania will rise to approximately 25 billion cubic feet per day and natural gas liquids production will rise to at least 200,000 barrels per day.

Industry's argument against a severance tax centers largely on its potential effect on producers' competitiveness in a low-cost pricing environment and the replication of a current "impact fee" that was levied in 2012.

In the context that the Marcellus and Utica shale basins collectively represent the third largest natural gas basin in the world – behind only Qatar and Russia - **means that we are sitting on the largest natural gas basin in North America.**

According to IHS Markit, current and future upstream producer's activity in the Marcellus and Utica shale plays are underpinned by superior upstream economics and IHS Markit expects upstream producers to continue to explore, develop, and produce the significant natural gas and NGL resource base in the basins with the best economics—the Marcellus and Utica Shales. **They represent the "new order" of shale drilling in the US.**

For those that argue that we have a severance tax through the imposition of an impact fee, I want to draw your attention to the following statistic: From 2008-2016, the state of Texas received over **$12.7 billion** in natural gas severance taxes, compared to Pennsylvania's **$1 billion** in impact fees.

Interestingly, in Texas, depending on the contract between producer and purchaser, both parties can agree that a **purchaser** will pay the natural gas taxes. If other states and nations are competing for our natural gas supply, it is possible that costs associated with the use of Marcellus natural gas can be borne in any number of ways.

To those organizations, entities, and people that present valid and reasonable arguments about focusing our efforts on the downstream opportunities that come along with this resource, we agree. And we have been doing that.

The sheer abundance of our natural resources – both fuel and feedstock - can usher manufacturing development within our own state's borders - but it is not guaranteed.

Last year, we announced that Shell decided to build a major petrochemical complex in Beaver County. Pennsylvania is the first state in Appalachia to attract an ethane cracker. We did that by working side-by-side with the company, trade organizations, local and state governments, economic development partners, and community stakeholders to take the project from prospect to a final investment decision over the course of five years.

This project will create 6,000 full-time construction jobs at peak and 600 full-time permanent positions when complete. When the ribbon is cut at the facility, Pennsylvania will have the experience of attracting, site developing, permitting, and building the first ethane cracker in the Northeast. Shell will generate what an export pipeline cannot: a job multiplier effect of 5 to 7 times with additional indirect and induced jobs and follow-on investment in Pennsylvania to further support the industry.

Until this plant is built, however, Pennsylvania will continue to export 100% of our ethane to the Gulf Coast, Canada, and Norway.

If most our natural resources are, and will continue to be exported, there can be no stronger argument for a dual strategy that includes establishing a fair severance tax and maximizing opportunities for in-state use of our own natural gas and natural gas liquids to stimulate workforce and economic development right here in Pennsylvania.

We are maximizing economic development opportunity by encouraging the expansion of existing companies and the attraction of new facilities that are large consumers of natural gas for energy and/or natural gas liquids and their derivatives as raw materials in their manufacturing processes.

DCED is working to attract natural gas and natural gas liquids end users nationally and internationally.

We are developing a coordinated marketing strategy to encourage and promote Pennsylvania as a strategic location.

We have been engaging in cross border collaborations with Ohio and West Virginia to cooperate in marketing efforts to attract new businesses, strengthen workforce development programs, spur investments in expanding infrastructure and delivery of natural gas and liquids, and encourage our academic institutions to expand and collaborate on research related to natural gas uses and opportunities.

We are also working to expand end-use through the Pipeline Investment Program, which allows for natural-gas pipelines to be extended to residents and businesses to lower their energy costs by utilizing Pennsylvania's abundant and low-cost natural gas.

Currently, Pennsylvania is at the epicenter of an energy revolution. We can shape our own destiny by ensuring that our natural resources are taxed fairly and appropriately, and used to support Keystone job creation and growth, accomplished through in-state use and/or manufacture of the natural gas and natural gas liquids.

As large volumes of natural gas and natural gas liquids position Pennsylvania as a global leader, we will continue our strong focus on ensuring that Pennsylvanians benefit both through the enactment of a fair severance tax and through the development of new ways to use our resources for our own good.

We do not want Pennsylvania to miss out on the opportunity to receive the full benefits of a globally relevant and economically prosperous shale play that is taking place within our borders.

We can do that with a fair severance tax.

Thank you very much. Acting Secretary McDonnell and I look forward to answering any questions you may have.

Reference ONLY: Texas Natural Gas Severance Tax vs. Pennsylvania Impact Fee

Year	Texas Severance Tax (75%)	PA Impact Fee
2008	$2,684,648,000	$0
2009	$1,407,739,000	$0
2010	$725,538,000	$0
2011	$1,109,718,000	$0
2012	$1,534,630,000	$204,200,000
2013	$1,495,203,000	$202,500,000
2014	$1,899,582,000	$225,800,000
2015	$1,280,410,000	$223,500,000
2016	$578,799,000	$187,700,000
TOTAL	$12,716,267,000	$1,043,700,000

Prepared Testimony of

Gladys M. Brown
Chairman
Pennsylvania Public Utility Commission

before the

Pennsylvania House Democratic Policy Committee

May 22, 2017

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Introduction

Good morning Chairman Sturla and members of the House Democratic Policy Committee. I am Gladys Brown, Chairman of the Public Utility Commission (Commission). I am here today, on behalf of the Commission, to offer testimony concerning the Commonwealth's existing impact fee on natural gas producers.

Before I begin I wish to convey that the Commission remains agnostic as to any natural gas severance tax policies. It is my intention with this testimony to provide a background on the impact fee, explain how the Commission administers the fee, and update you on recent developments regarding the audit of the impact fee and the Commonwealth Court's interpretation of statutory language related to the impact fee.

Act 13 of 2012

Act 13 of 2012 (Act 13) was signed into law by Governor Corbett on February 14, 2012. Act 13 modified Title 58 (Oil and Gas) of the Pennsylvania Consolidated Statutes by, *inter alia,* directing the Commission to: (1) calculate an impact fee payable by producers with qualifying spud unconventional gas wells in the Commonwealth, (2) collect this fee from producers, and (3) distribute the funds received from the fee among state agencies and local governments to be used for specific purposes.

Each eligible unconventional well is subject to a fixed fee based on two components: (1) the age of the well from spud date, in years, and (2) the average annual price of natural gas as established by the New York Mercantile Exchange's Henry Hub Natural Gas Futures Contract (NYMEX price). Each well is subject to a decreasing established fee schedule which is based on the age of a particular well from spud date. As the reported NYMEX price increases, the fee applicable to each well will also increase within the established fee schedule tiers. Depending on the NYMEX price, horizontal wells which are within one year of spud date are subject to an impact fee ranging from a floor of $40,000 to a ceiling of $60,000. To demonstrate the decreasing fee schedule over time, at 11 to 15 years the same horizontal wells are subject to an impact fee ranging from a floor of $5,000 to a ceiling of $10,000.

Each qualifying unconventional gas well is subject to the impact fee on a calendar year basis. Producers must submit fees to the Commission by April 1st of each subsequent reporting calendar year. For the 2015 reporting year, the Commission collected a total of $187,711,700 in impact fees from 81 producers. After the fees have been collected, the Commission must distribute the fees by July 1st. For the 2015 reporting year, the Commission distributed funds amongst the following entities as required by law:

- County Conservation Districts/State Conservation Commission - $7,545,000
- Fish and Boat Commission - $1,000,000
- PA Public Utility Commission - $1,000,000
- Department of Environmental Protection - $6,000,000
- PA Emergency Management Agency - $750,000
- Office of the State Fire Commissioner - $750,000
- Department of Transportation - $1,000,000
- Counties, Municipalities, and the Housing Affordability & Rehabilitation Enhancement Fund - $101,800,020
- Marcellus Legacy Fund - $67,866,680

The number of distinct entities receiving funds totaled over 1,500, including 1,487 municipalities and 37 counties. Annual collections have ranged from a high of $225,752,000 for the 2013 reporting year to the aforementioned $187,711,700 collected for the 2015 reporting year. Since the passage of Act 13, the Commission has collected and distributed just over $1 billion.

Act 13 places a restriction or cap on the amount of impact fee funds municipalities can receive. This cap shall not exceed the greater of $500,000 or 50% of the municipalities previous years' total fiscal budget. Based on this restriction, the Commission requires municipalities to annually submit their budget information in order to accurately calculate the applicable cap.

Municipalities and counties receiving Act 13 monies are required to use the funds for the following thirteen purposes:

- Construction and repair of roadways
- Water system construction and maintenance
- Emergency preparedness and public safety services
- Environmental programs
- Preservation and reclamation of water supplies
- Tax reductions
- Projects to increase the availability of safe and affordable housing
- Records management, geographic information systems, and information technology
- Social services

- Judicial services
- For deposit into the county or municipality's capital reserve fund if the funds are used solely for a purpose set forth in this subsection.
- Career and technical centers for training of workers in the oil and gas industry
- Local or regional planning initiatives

Each municipality and county reports to the Commission the amount of funds used for these enumerated purposes. This data is conveyed to the Commission via a standard form, due by March 1st of each year and applicable to the expenditure of Act 13 funds for the previous calendar year.

The Commission compiles all relevant data associated with its administration of the impact fee into an annual report. This data includes, but is not limited to, the number of producers, total dollars distributed, the number of wells, and aggregate fund usage reporting data received from municipalities and counties. Annual reports are delivered to the General Assembly and published to the Commission's dedicated Act 13 website. Website visitors can review specifics on funds collected and distributed for each year since 2011. The site allows individuals to search and download statistics such as distributions to individual municipalities or counties; allocation and usage of funds based on reports submitted by various municipalities; eligible wells per county/municipality; and payments by producers.

Performance Audit

In December of 2016, the Department of the Auditor General released its Performance Audit of the Commission's Act 13 administration. The Executive Summary of the Performance Audit stated the following:

> *"We reviewed the distributions to the conservation districts, state agencies, counties, and municipalities to verify whether PUC accurately distributed the Impact Fee funds for reporting years 2011-2014.*
>
> *PUC does not obtain any support from the municipalities to validate the budget amounts submitted. With exception of relying on these self-reported budgets from the municipalities, PUC appears to have accurately calculated the Impact Fees distributed to the conservation districts, state agencies, counties, and municipalities, and accurately applied the municipality restriction limit in accordance with Act 13."*

Findings included in the audit also point to the potential benefit of additional training for municipal officials, which the Commission has provided and is working to enhance. These actions include the development of a webinar for municipal budget reporting and additional materials for municipal officials available on the Commission's Act 13 website. The Commission also continues to work with statewide associations for townships, boroughs, and county commissioners to communicate impact fee issues and updates. Further, the Commission entered into a Memorandum of Understanding with the Pennsylvania Department of Community and Economic Development in 2013 to provide ongoing outreach and training to municipalities.

Although the Commission was accurate in the calculation and distribution of funds, concerns were raised within the Performance Audit regarding the accuracy of budgets submitted by municipalities which serve as the basis for certain distributions. Additionally, a finding noted that a portion of impact fee expenditures reported to the Commission by some municipal recipients may not comport with the requirements as outlined in Act 13. As for these audit findings, specifically involving monitoring of local government spending and verification of budgets submitted by those entities, it is important to note that the Commission is not authorized to monitor, audit, or enforce local government spending of Act 13 funds – something that was clearly acknowledged in the audit report.

In our October 27, 2016 audit response letter, the Commission emphasized that other state agencies, including the Department of Auditor General, Office of Attorney General and County District Attorney Offices, the Department of Community and Economic Development, and the State Ethics Commission, have general audit and/or enforcement authority over county and municipal expenditures of Act 13 funds. As such, impact fees are subject to government oversight and audit at the state and local level. Broader discussions regarding the structure of the Act, reporting requirements for fee recipients, potential monitoring of impact fee uses, and other issues raised by the Auditor General are matters for the Pennsylvania General Assembly.

Commonwealth Court Decision

On March 29, 2017, the Commonwealth Court issued an opinion reversing the Commission's Order in the proceeding involving Snyder Brothers, Inc. The sole issue in the case was the interpretation of Act 13's definition for a certain subset of gas wells called “stripper wells.” Under the Act, wells qualifying as stripper wells are not subject to impact fees. Act 13 defines these wells in the following manner.

> "Stripper well" An unconventional gas well incapable of producing more than 90,000 cubic feet of gas per day during any calendar month, including production from all zones and multilateral well bores at a single well, without regard to whether the production is separately metered.

The Commission concluded, via Order entered June 11, 2015, that wells qualify as stripper wells, and are therefore exempt from the impact fee, if they do not produce more than 90,000 cubic feet (CF) of gas per day in each month of the year. In other words, wells that produce more than 90,000 CF in just one month of a calendar year do not meet the stripper well definition and are therefore subject to the impact fee.

In that Order, the Commission determined that the statutory definition of “stripper well” was ambiguous, stating that the word “any” had multiple meanings that materially affect the application of the stripper well impact fee exemption. Namely, the Commission concluded that “any” could be interpreted to mean “every,” “all,” “a,” or “one.” Based on rules of statutory construction the Commission concluded that, in this instance, the word “any” was not synonymous with “a” or “one,” but rather meant “every” or “all.”

The Commonwealth Court rejected the Commission’s position that the definition was ambiguous. The Court found that wells which do not produce more than 90,000 CF per day in any one month meet the stripper well definition and are therefore exempt from the impact fee. In other words, wells are subject to impact fees if they produce more than 90,000 CF per day during all twelve months of the year. Under the Court’s decision, wells that produce greater than 90,000 CF per day during 11 months of the year, but fail to produce greater than 90,000 CF per day in the remaining month of that year are not subject to the impact fee.

In response to the Commonwealth Court’s decision, the Commission has filed a Petition for Allowance of Appeal with the Pennsylvania Supreme Court. This Petition is presently pending. Additionally, on April 11, 2017, the Commission sent a letter to Governor Wolf as well as the House and Senate leadership. In that letter, the Commission summarized the issue and conveyed two items of concern regarding the Commonwealth Court decision. First, if Commonwealth Court decision had been made before the April 1st reporting deadline, the Commission calculated the impact fees for the 2016 reporting year would have reduced by approximately $16 million. As well, reductions are expected to increase in future years given the age and production level of wells and given producers' ability to fully take advantage of the Commonwealth Court's interpretation of this definition. Second, the Commission conveyed, to the extent it is deemed appropriate, a possible legislative solution to clarify the intention of the General Assembly regarding the definition. After discussions between the Commission and Democratic Staff, Representative Snyder introduced House Bill 1283 (HB 1283). HB 1283, as drafted, revises the definition of "stripper well" as follows:

> "Stripper well" An unconventional gas well incapable of producing more than 90,000 cubic feet of gas per day during [any] **every** calendar month in **a calendar year**, including production from all zones and multilateral well bores at a single well, without regard to whether the production is separately metered.

Conclusion

The Commission holds the utmost respect for the Commonwealth Court and every decision it makes. In the course of administering the law, judicial bodies often come to constructive disagreements, as is their right. In this instance, it is the Commission's hope to educate the General Assembly about this proceeding so as to keep it duly informed while it evaluates policies related to the Commonwealth's natural gas production industry. In the meantime, the Commission will continue to steadfastly administer our responsibilities under Act 13.

The Commission is at your service should you have any questions.

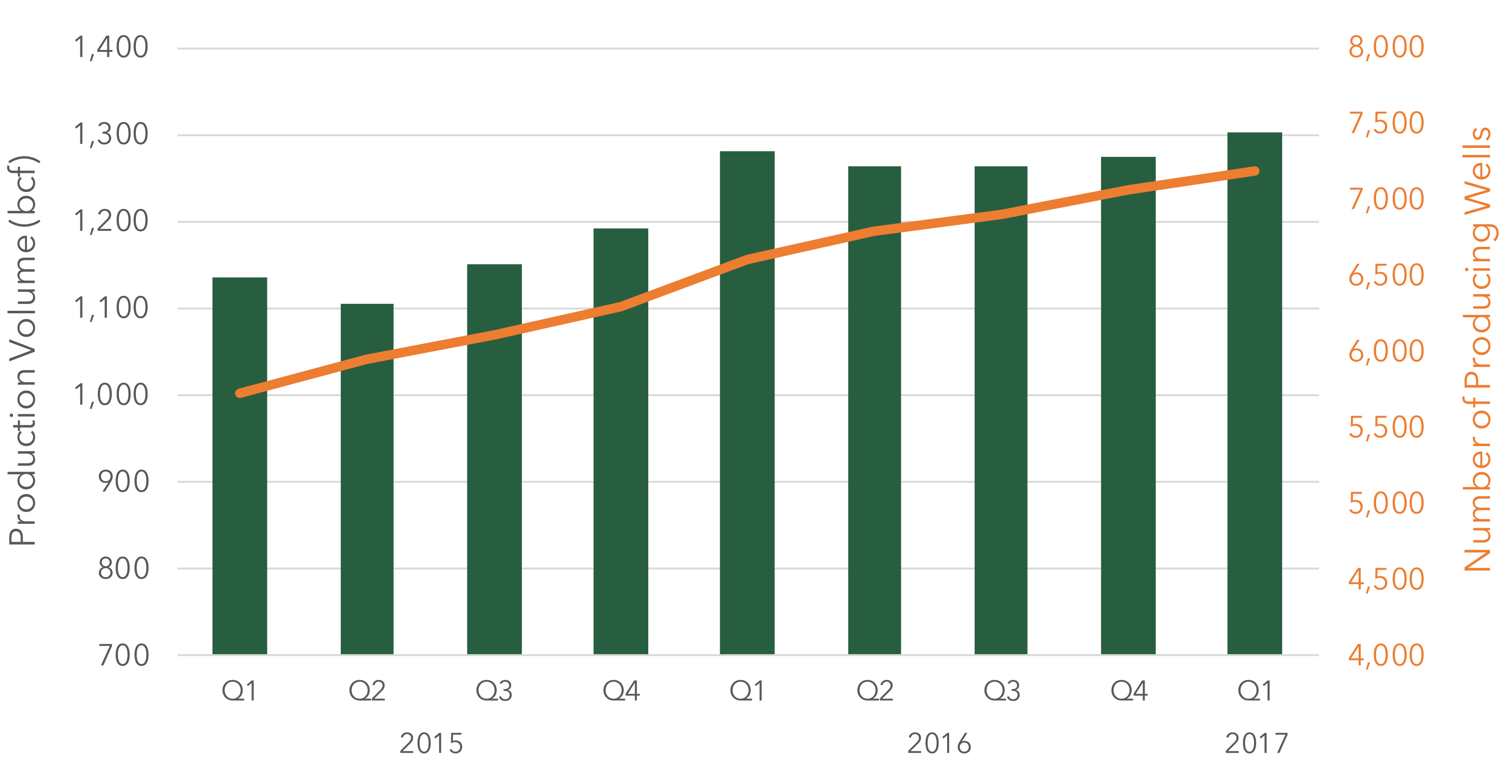
Natural Gas Production Report

JANUARY TO MARCH

FIRST QUARTER - 2017

- **PRODUCTION UP 1.7% FROM PRIOR YEAR**
- **PRODUCING WELLS UP 8.0% FROM PRIOR YEAR**

Quarterly Production and Well Counts



Natural Gas Production Report

Q1

Quarterly Trends

For the first quarter of 2017, recent data from the Department of Environmental Protection (DEP) show that total natural gas production volume was 1,305.7 billion cubic feet (bcf) and the number of producing wells was 7,678. Compared to the first quarter of 2016, total production grew by 1.7 percent, while the number of producing wells increased by 8.0 percent. Data for the first quarter are equal to the calendar year-to-date totals.

Table 1: Production Volume (bcf)

	First Quarter			Calendar Year-to-Date		
	2016	2017	Growth	2016	2017	Growth
Horizontal	1,280.5	1,303.0	1.8%	1,280.5	1,303.0	1.8%
Vertical	3.2	2.7	-15.6%	3.2	2.7	-15.6%
Total	1,283.7	1,305.7	1.7%	1,283.7	1,305.7	1.7%

Table 2: Number of Wells

	First Quarter			Calendar Year-to-Date		
	2016	2017	Growth	2016	2017	Growth
Producing Wells						
Horizontal	6,605	7,187	8.8%	6,605	7,187	8.8%
Vertical	504	491	-2.6%	504	491	-2.6%
Total	7,109	7,678	8.0%	7,109	7,678	8.0%
Non-Producing Wells						
Horizontal	2,126	2,117	-0.4%	2,126	2,117	-0.4%
Vertical	484	497	2.7%	484	497	2.7%
Total	2,610	2,614	0.2%	2,610	2,614	0.2%
Horizontal Detail						
Shut In	968	917	-5.3%	968	917	-5.3%
Spud, Not Completed	792	802	1.3%	792	802	1.3%
Plugged	331	358	8.2%	331	358	8.2%
Other	35	40	14.3%	35	40	14.3%
Total	2,126	2,117	-0.4%	2,126	2,117	-0.4%

Notes: The number of producing wells in each quarter does not directly correspond to the year-to-date total because some wells do not produce in every quarter. The year-to-date number represents wells that were producing in any quarter of that year. For non-producing wells, the year-to-date number represents wells that produced no gas for that entire period. "Other" includes wells with miscellaneous designations such as abandoned. All characterizations of wells are based on information submitted by the operator.

Tables 3 and 4 decompose first quarter and calendar year-to-date production volume from horizontal wells by spud year. As shown in Table 3, production gains in the first quarter were from wells spud in 2015 and 2016. Wells spud in those years comprised nearly one quarter of total production. For wells spud in 2014 and earlier, production declined in the first quarter (-16.1 percent), despite a small increase in the number of producing wells (2.4 percent).

Table 3 also shows that only 81 of the 504 wells spud in calendar year 2016 (16.1 percent) produced gas in the first quarter of 2017. For wells spud in calendar year 2015, 566 of the 783 wells spud (72.3 percent) produced gas, an increase of 347 wells from the prior year.

Table 3: First Quarter Production, by Spud Year

Spud Year	Production Volume (bcf)			Number of Wells			Producing Wells		
	2016	2017	Growth	2016	2017	Growth	2016	2017	Growth
2017	n.a.	0	n.a.	n.a.	179	n.a.	n.a.	0	n.a.
2016	0	43.3	n.a.	110	504	358.2%	0	81	n.a.
2015	87.2	258.1	196.0%	783	783	0.0%	219	566	158.4%
2014	397.5	347.5	-12.6%	1,349	1,349	0.0%	1,005	1,160	15.4%
2013	295.7	218.5	-26.1%	1,187	1,187	0.0%	1,070	1,077	0.7%
2012	183.7	148.9	-18.9%	1,311	1,311	0.0%	1,035	1,053	1.7%
2011	316.4	286.8	-9.4%	3,991	3,991	0.0%	3,276	3,250	-0.8%
Total	1,280.5	1,303.0	1.8%	8,731	9,304	6.6%	6,605	7,187	8.8%

Notes: Horizontal wells only. This table displays 2016 and 2017 production based on the year wells were spud. For example, wells with spud year 2014 were spud during calendar year 2014, and their production is shown for the first quarter of 2016 and the first quarter of 2017. Spud year 2011 includes all wells spud in 2011 or earlier.

Table 4: Calendar Year-to-Date Production, by Spud Year

Spud Year	Production Volume (bcf)			Number of Wells			Producing Wells		
	2016	2017	Growth	2016	2017	Growth	2016	2017	Growth
2017	n.a.	0	n.a.	n.a.	179	n.a.	n.a.	0	n.a.
2016	0	43.3	n.a.	110	504	358.2%	0	81	n.a.
2015	87.2	258.1	196.0%	783	783	0.0%	219	566	158.4%
2014	397.5	347.5	-12.6%	1,349	1,349	0.0%	1,005	1,160	15.4%
2013	295.7	218.5	-26.1%	1,187	1,187	0.0%	1,070	1,077	0.7%
2012	183.7	148.9	-18.9%	1,311	1,311	0.0%	1,035	1,053	1.7%
2011	316.4	286.8	-9.4%	3,991	3,991	0.0%	3,276	3,250	-0.8%
Total	1,280.5	1,303.0	1.8%	8,731	9,304	6.6%	6,605	7,187	8.8%

Notes: Horizontal wells only. This table displays 2016 and 2017 production based on the year wells were spud. For example, wells with spud year 2014 were spud during calendar year 2014, and their production is shown for the first quarter of 2016 and the first quarter of 2017. Spud year 2011 includes all wells spud in 2011 or earlier.

Table 5 displays production volume, total well counts, producing well counts and average production per well over the last nine quarters. Over the last four quarters, production growth decelerated from 14.5 percent in the second quarter of 2016 to 1.8 percent in the most recent quarter. The number of producing wells has steadily grown over the last five quarters. Annual growth in average production per well has declined since the third quarter of 2016.

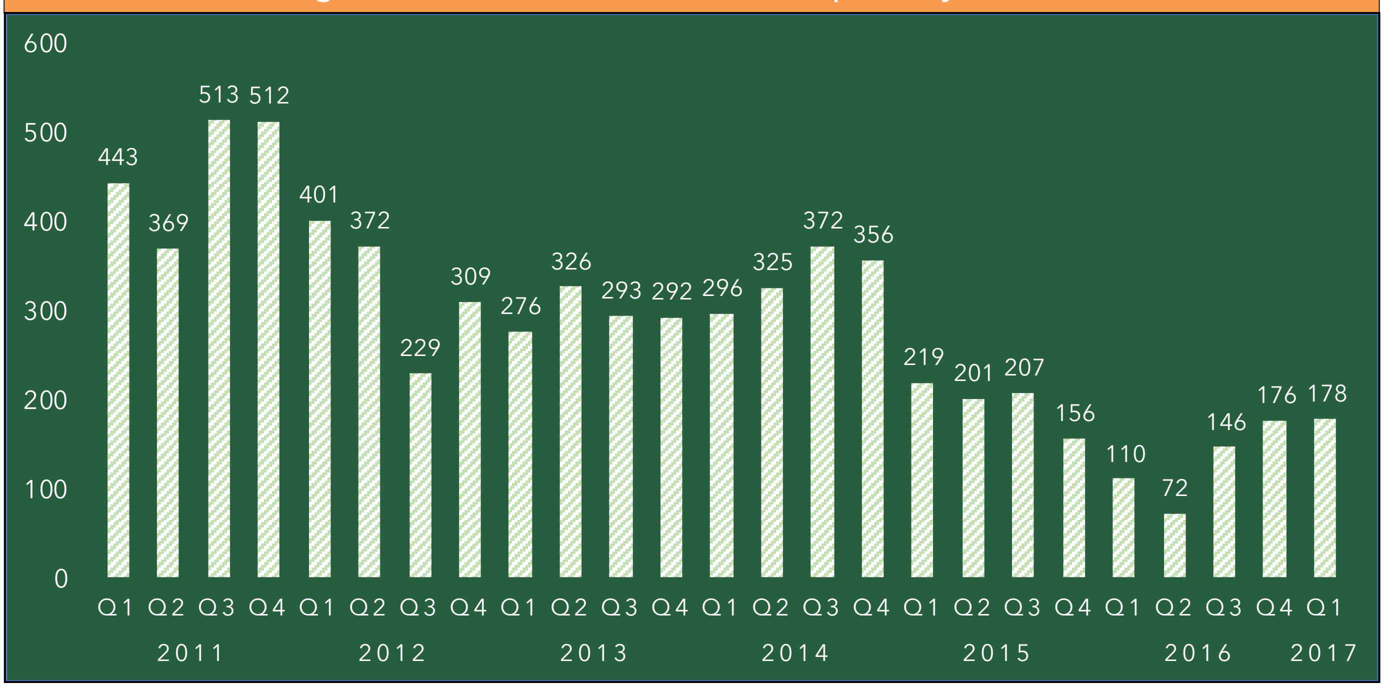
Table 5: Historical Quarterly Production Volume and Well Counts

	2015				2016				2017
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Production Volume (bcf)	1,134.7	1,103.9	1,151.3	1,192.1	1,280.5	1,264.4	1,263.0	1,273.7	1,303.0
Annual Growth Rate	n.a.	n.a.	n.a.	n.a.	12.8%	14.5%	9.7%	6.8%	1.8%
Number of Wells	8,057	8,258	8,465	8,621	8,731	8,803	8,949	9,125	9,304
Annual Growth Rate	n.a.	n.a.	n.a.	n.a.	8.4%	6.6%	5.7%	5.8%	6.6%
Producing Wells	5,726	5,947	6,104	6,295	6,605	6,794	6,898	7,066	7,187
Annual Growth Rate	n.a.	n.a.	n.a	n.a.	15.4%	14.2%	13.0%	12.2%	8.8%
Avg. Production per Well	198.2	185.6	188.6	189.4	193.9	186.1	183.1	180.3	181.3
Annual Growth Rate	n.a.	n.a.	n.a	n.a.	-2.2%	0.3%	-2.9%	-4.8%	-6.5%

Notes: Horizontal wells only. Data through 2014 were reported on a half-year basis. Starting in 2015, data are reported on a monthly basis.

Figure 1 displays the number of new horizontal wells spud in each quarter since 2011. After declining to its lowest point in the second quarter of 2016, new horizontal wells spud have increased in each of the last three quarters.

Figure 1: New Horizontal Wells Spud, By Quarter

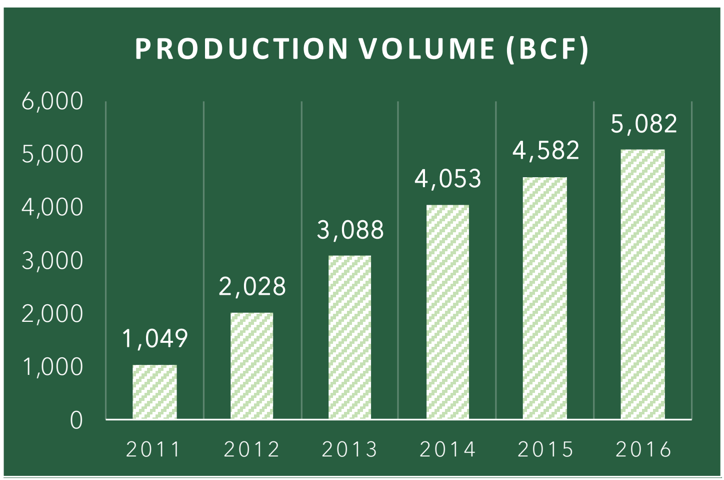


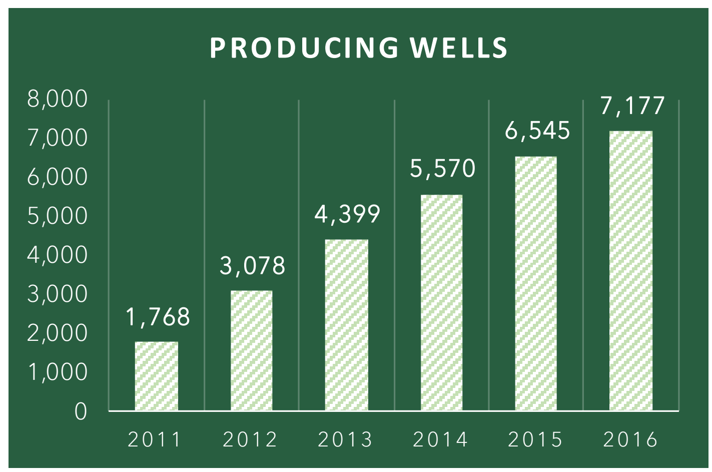
Annual Trends

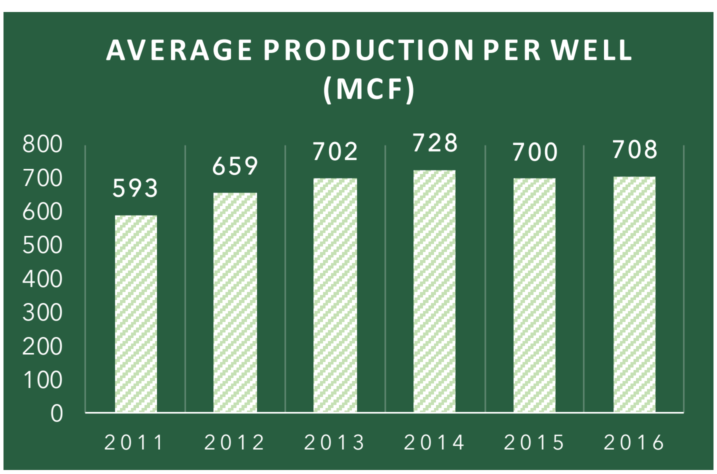
The following graphs display annual totals for production volume, producing well counts, average production per well and non-producing well counts. These graphs pertain only to horizontal production and well counts. Vertical wells comprised roughly 0.2 percent of production in the first quarter of 2017.

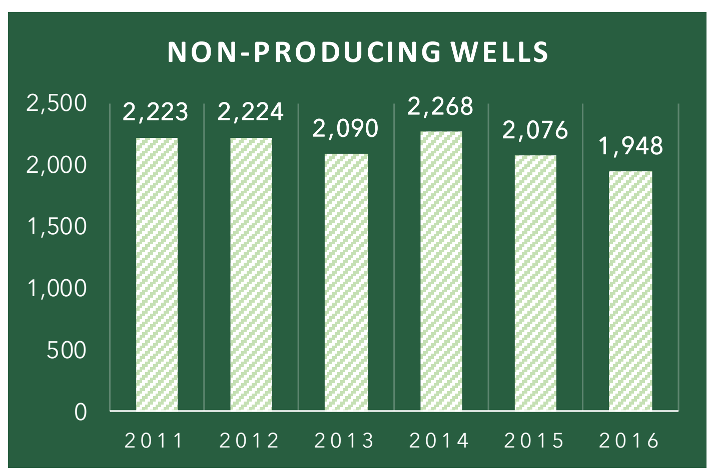
In 2016, total production volume was 5,082 bcf, an increase of 10.9 percent from the prior year. From 2011 to 2016, production volume increased at an average annual rate of 37.1 percent. The number of producing wells in 2016 was 7,177, which was 9.7 percent higher than 2015. From 2011 to 2016, the number of producing wells grew at an average annual rate of 32.3 percent.

Average production per well in 2016 was 708 mcf, a cumulative increase of 19.4 percent since 2011. The majority of that growth occurred in 2012 and 2013, and average production per well has leveled off since that time. The number of non-producing wells in 2016 was 1,948, a decline of 6.2 percent from the prior year. Non-producing wells have declined in each year since 2014.









Note: Producing wells represents the number of wells that produced gas at any point during the year. Non-producing wells represents the number of wells that did not produce gas at any point during the year.

County Comparison

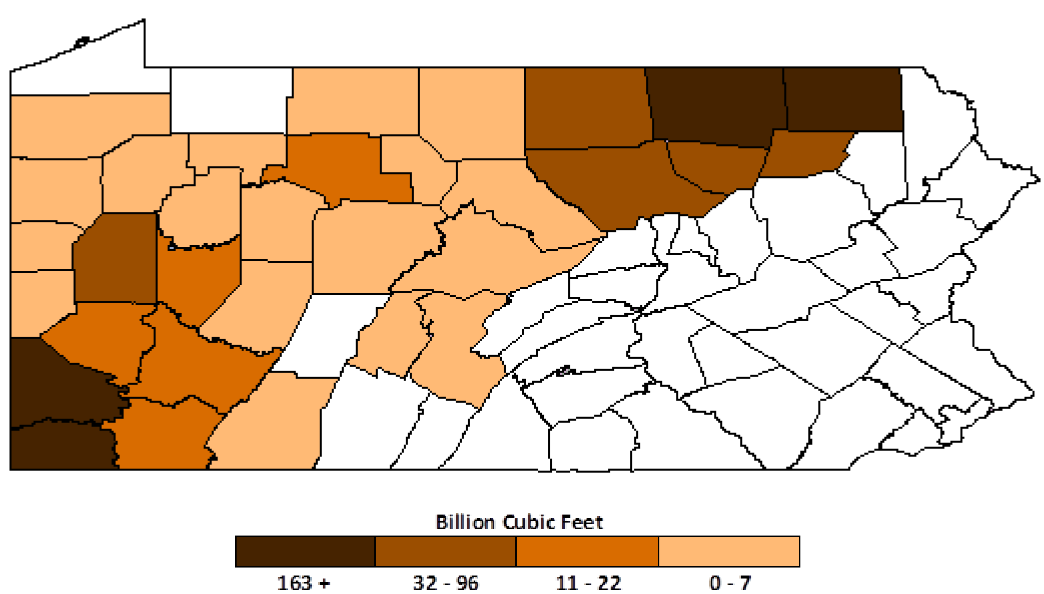
Table 6 shows county-level production volume and producing well counts for the calendar year-to-date. Four counties (Susquehanna, Washington, Bradford and Greene) comprised two thirds of statewide production. All counties except Bradford, Greene and Lycoming registered production gains. Figure 2 displays a geographic map of calendar year-to-date production by county.

Table 6: Calendar Year-to-Date Production, by County

		Production Volume (bcf)				Number of Producing Wells			
		Year-to-Date		2017 Metrics		Year-to-Date		2017 Metrics	
Rank	County	2016	2017	Share	Growth	2016	2017	Share	Growth
1	Susquehanna	310.1	313.0	24.0%	0.9%	956	1,068	14.9%	11.7%
2	Washington	197.9	213.0	16.3%	7.6%	1,089	1,209	16.8%	11.0%
3	Bradford	185.1	183.8	14.1%	-0.7%	1,011	1,024	14.2%	1.3%
4	Greene	175.7	163.7	12.6%	-6.8%	696	790	11.0%	13.5%
5	Lycoming	116.0	95.8	7.3%	-17.4%	738	754	10.5%	2.2%
6	Wyoming	65.3	82.7	6.3%	26.6%	169	197	2.7%	16.6%
7	Tioga	48.4	52.9	4.1%	9.3%	524	555	7.7%	5.9%
8	Butler	43.1	44.7	3.4%	3.7%	322	353	4.9%	9.6%
9	Sullivan	25.4	32.3	2.5%	27.2%	70	91	1.3%	30.0%
10	Fayette	21.9	22.4	1.7%	2.3%	172	189	2.6%	9.9%
11	All Other	91.5	98.8	7.6%	8.0%	858	957	13.3%	11.5%

Note: Horizontal wells only.

Figure 2: Calendar Year-to-Date Production, by County



State Comparison

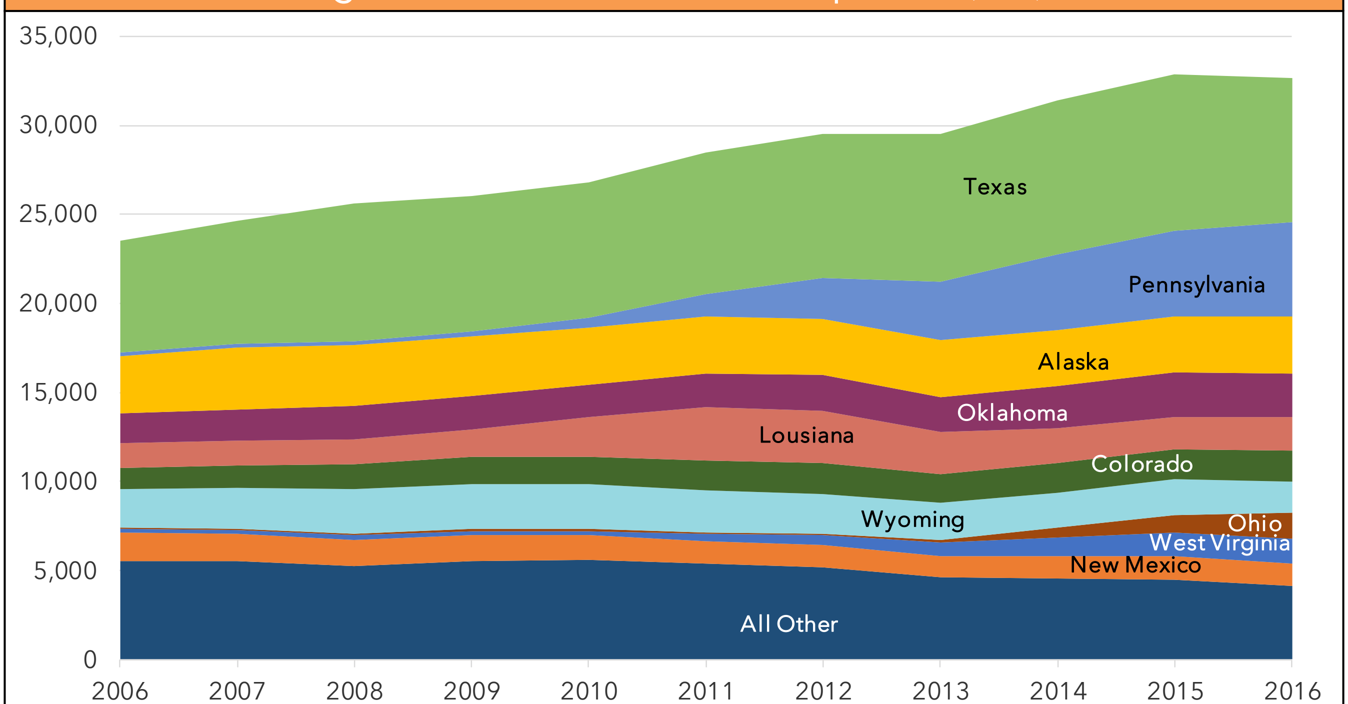
Table 7 displays a state comparison of gross production from all well types. Among the top-ten producing states, Ohio and West Virginia recorded the largest production gains for the first two months of 2017. Pennsylvania, Alaska and New Mexico recorded modest increases. Five states (Texas, Oklahoma, Louisiana, Colorado and Wyoming) registered declines. Figure 3 displays the composition of total U.S. production by state, over the last decade.

Table 7: State Production Comparison (bcf)

Rank	State	Production Volume			Annual Growth Rate		
		CY 2015	CY 2016	2017	CY 2015	CY 2016	2017
1	Texas	8,801.3	8,099.2	1,237.4	1.6%	-8.0%	-9.8%
2	Pennsylvania	4,813.0	5,264.0	885.9	13.0%	9.4%	0.9%
3	Alaska	3,175.3	3,229.9	576.6	0.2%	1.7%	0.8%
4	Oklahoma	2,499.6	2,468.3	374.8	7.2%	-1.3%	-9.7%
5	Louisiana	1,784.8	1,869.6	297.6	-9.3%	4.8%	-4.6%
6	Colorado	1,704.8	1,703.3	273.5	3.7%	-0.1%	-1.6%
7	Wyoming	1,983.7	1,766.8	271.1	-0.7%	-10.9%	-10.1%
8	Ohio	1,014.9	1,466.9	255.9	98.1%	44.5%	11.8%
9	West Virginia	1,318.8	1,375.1	236.3	23.6%	4.3%	6.3%
10	New Mexico	1,296.5	1,287.0	202.4	2.4%	-0.7%	1.2%
11	All Other	4,502.1	4,117.3	638.3	-0.7%	-8.5%	-9.7%

Notes: Production and growth rates for 2017 through February. Data for all other years are for the full calendar year. Source: U.S. Energy Information Administration. Production does not directly correspond to DEP data.

Figure 3: State Production Comparison (bcf)



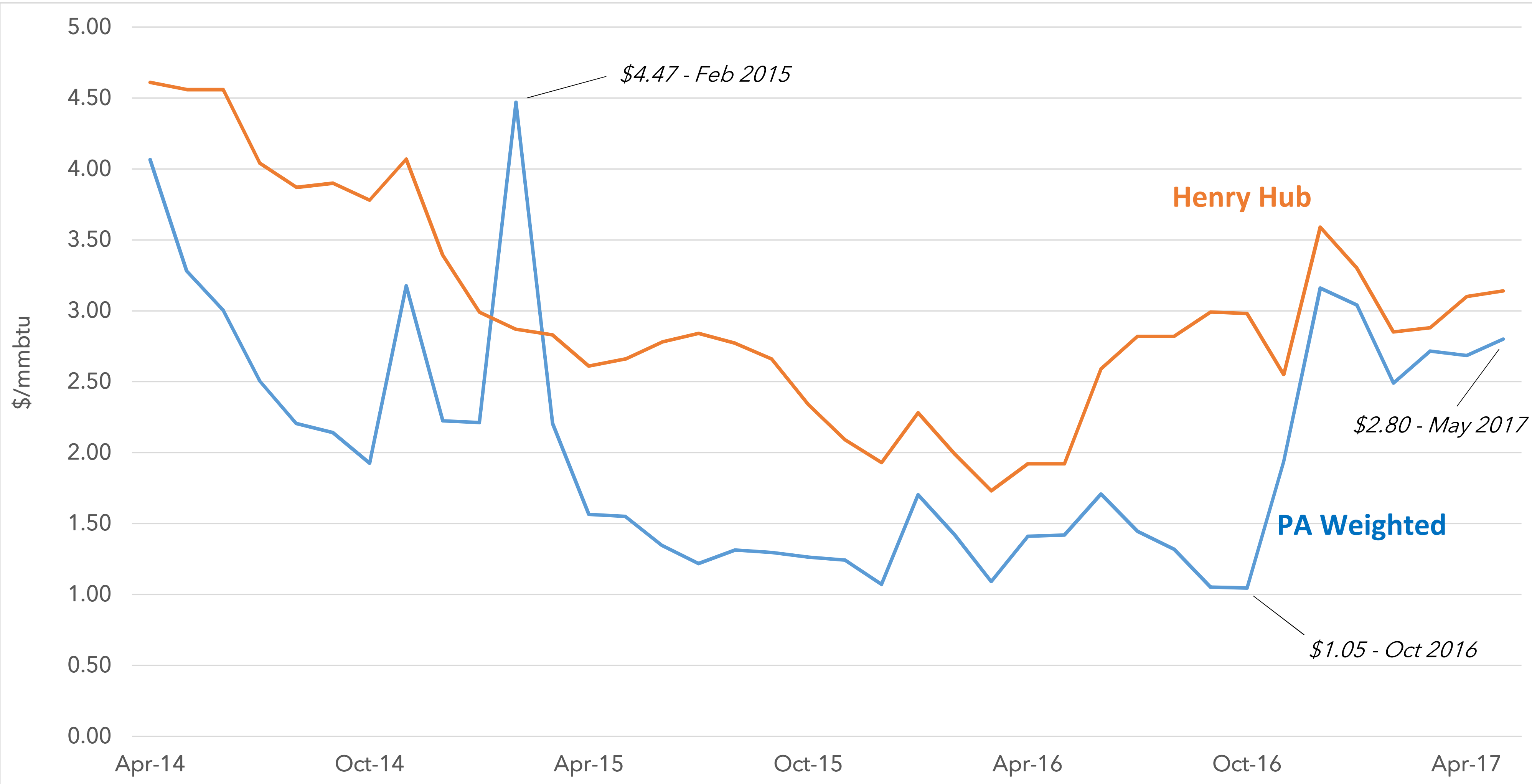
Glossary of Natural Gas Terminology

Abandoned	No longer producing, but not plugged, and without an available operator.
Bcf	Billion cubic feet. Used as a measure of production volume.
Completed	Capable of producing. Includes drilling and casing and, in the case of an unconventional well, fracturing the shale formation to release gas.
Mcf	Thousand cubic feet. Used as a measure of production volume.
Plugged	Permanently sealed with cement or by some similar method.
Production	The natural gas recovered from a well.
Shut-In	Temporary suspension of production activity. Directly corresponds to the term "capped," as defined in Act 13 of 2012.
Spud	The commencement of drilling activity. Often refers to the first stage at which casing is placed into the wellbore. "Spud year" refers to the year in which a well was spud, as reported to the Department of Environmental Protection.
Unconventional	Requiring technological methods that go beyond merely drilling a well and capturing the gas. These methods usually include horizontal drilling into deep formations and fracturing with fluids.

About the Report

The IFO publishes this report on a quarterly basis each May, August, November and February for the preceding quarter using monthly production data submitted to DEP by natural gas extractors that operate in the state. Unless otherwise noted, this report uses those data, in conjunction with DEP data on wells spud, to develop statewide tabulations of production volume and well counts. These data pertain only to gas produced from unconventional formations, which include the Marcellus and Utica. The data included in this report are current as of May 19, 2017.

Natural Gas Spot Price Comparison



Note: PA Weighted is a weighted average spot price for the Leidy, Dominion South, TETCO M-3 and TGP Z4 trading hubs.
Sources: Bentek Energy, U.S. Energy Information Administration.

Testimony of
Jim Welty, Vice President for Government Affairs
Marcellus Shale Coalition
Before the
Pennsylvania House Democratic Policy Committee
May 22, 2017

Good morning, Chairman Sturla and members of the House Democratic Policy Committee. Thank you for the opportunity to testify today regarding efforts to increase taxes on unconventional natural gas producers in Pennsylvania. My name is Jim Welty, and I serve as Vice President for Government Affairs for the Marcellus Shale Coalition (MSC). The MSC is a state-wide trade association representing nearly 200 energy producing, midstream, transmission and supply chain members who are fully committed to working with local, county, state and federal government officials to facilitate the development of natural gas resources in the Marcellus, Utica and related geologic formations.

Pennsylvania's Severance Tax: The Impact Fee

One of the most inaccurate assertions perpetrated in this debate is that Pennsylvania is the only natural gas producing state without a severance tax. Not only is this assertion wrong, but it clouds any effort to have an honest discussion about the health of the business climate in the Commonwealth. Unconventional gas producers pay a severance tax, and they pay it on top of every other tax required to be paid by every other business in Pennsylvania.

Pennsylvania's severance tax is simply called something different – an impact fee. Under Act 13 of 2012[1], the impact fee was created and levied upon unconventional natural gas producers in the Commonwealth. This fee is imposed upon each unconventional well that is drilled, and while the exact amount of the fee is outlined within Act 13, it can be as high as $60,000 per well in the well's first year. Pennsylvania's fee is unique in that its revenues are allocated by formula to counties and municipalities that host drilling activity, as well as significant investments in

[1] 58 Pa.C.S. Chapter 23

statewide environmental programs like Growing Greener[2] and the Marcellus Legacy Fund[3]. Agencies with a role in overseeing shale gas activity, such as the Department of Environmental Protection (DEP), Pennsylvania Emergency Management Agency, Public Utility Commission, and others also receive annual allocations. For example, by this July, DEP will have received $36 million in impact fee revenue for permit and inspection staffing.

In total, Pennsylvania's impact fee has generated $1.219 billion, benefiting every community across the Commonwealth. No other industry in Pennsylvania boasts these kinds of contributions, and our industry is proud of the boon we have been to local governments and important environmental initiatives. Attempts to diminish or ignore the significant financial benefits our industry has bestowed on the Commonwealth is simply disappointing.

PA Impact Fee Revenue Collections
2012 - 2017

Year Distributed	Amount
2012	$204.2 M
2013	$202.5 M
2014	$225.8 M
2015	$223.5 M
2016	$187.7 M
2017	$175 M
TOTAL:	**$1.219 Billion**

[2] 27 Pa.C.S. Chapter 61 – Environmental Stewardship and Watershed Protection Act
[3] 58 Pa.C.S. §2315

Effective Tax Rate

Without question, the tax burden of any state impacts business decision making – and not just with our industry, with businesses in general. Companies tend to invest capital where they believe they will receive the greatest return, so understanding Pennsylvania's impact fee effective tax rate is essential to appreciating the significance of the industry's current tax burden.

To convert Pennsylvania's impact fee into an effective severance tax rate, one simply must estimate total revenues generated by the sale of natural gas and divide that by the total tax revenue paid to the Commonwealth. According to the Independent Fiscal Office (IFO), in 2016 Pennsylvania's impact fee collection was equivalent to a severance tax rate of 5%.[4]

While the IFO's understanding of the unconventional natural gas industry and impact fee has improved, we still believe the IFO underestimates the true effective tax rate by limiting its calculations to only two of the three major sale points in the Commonwealth[5]. When factoring all three, which we believe is the most accurate and reflective of Pennsylvania's market reality, the effective severance tax rate of the 2016 impact fee collection is approximately 9%. This higher rate is principally due to utilization of a more representative average price of $1.31/MCF for Pennsylvania natural gas, compared to $1.56/MCF utilized by the IFO. The MSC's calculation also recognizes that, under Act 13, the impact fee is the exclusive obligation of the natural gas producer. Therefore, royalty revenue paid to the leaseholder is not available to the producer to meet its impact fee assessment, which increases the effective severance tax rate. The IFO's analysis does not account for this stipulation of Act 13.

Comparison: Pennsylvania vs. Texas

Despite the clear evidence of our industry's contributions to Pennsylvania, it has been suggested by our state's economic development agency that we have somehow been cheated out of revenue when compared to Texas, which is home to the Barnett Shale, Eagle Ford Shale, Permian Basin

[4] 2016 Impact Fee Estimate – Independent Fiscal Office – January 2017 (Research Brief 2017-1)
[5] The IFO utilizes average prices realized at Dominion South and Leidy Hub, while the MSC utilizes average prices realized at Dominion South, Leidy Hub and Tennessee Zone 4, Pennsylvania's three major gas markets.

and parts of the Haynesville and Granite Wash formations, making Texas the most prolific oil producer in the United States.

In prior testimony before this committee, the Department of Community and Economic Development (DCED) included a chart in its testimony illustrating that between 2008–2016 the state of Texas received $12 billion in severance tax revenue, while the Commonwealth of Pennsylvania received $1 billion. What is particularly troubling is the total lack of context of this comparison or any ownership to the fact that the chief end of this particular agency – economic development – will be that which leads to greater prosperity and a larger tax base to the benefit of the entire Commonwealth.

First, the comparison fails to disclose the fact that while Texas is the nation's largest oil producer, Pennsylvania's shale play is exclusively natural gas. Second, the comparison arbitrarily calculates tax revenue starting in 2008, rather than examining revenue generated starting in 2012, when Pennsylvania's impact fee was enacted. Third, it excludes any comparison of tax *rates*; while Texas has a nominal rate of 7.5%, this rate is significantly discounted, up to 50% or more, for most wells in the early years of production until capital costs are recovered. Pennsylvania's impact fee, on the other hand, is levied not on production but rather on drilling activity and does not allow for recovery of capital costs for the well. As shared earlier, the MSC puts the effective severance tax rate of the impact fee for 2016 at approximately 9%.

Fourth, and most egregiously, the comparison ignores the fact that Texas' oil and gas industry and related production remains significantly larger than Pennsylvania's. While Pennsylvania is now the second largest producer of natural gas in the nation, only a few short years ago we were the 15th largest producer. For example, in 2016 Texas produced 54% more natural gas than Pennsylvania; in 2015 Texas produced 83% more natural gas than Pennsylvania; and in 2012 – the first year of our impact fee – Texas produced nearly 261% more natural gas than Pennsylvania. The comparison offered by DCED is akin to observing that California or New York bring in exponentially more revenue from their income tax than Pennsylvania and concluding that Pennsylvania's rate is unfairly low without taking into account the vast population disparity.

The following chart illustrates the historic disparity between production in Texas and Pennsylvania:

Texas & Pennsylvania Natural Gas Production 2011 - 2016[6]

Year	Texas		Pennsylvania	
	Production*	Tax Revenue	Production*	Tax Revenue
2011	7,934,689	$1,109.7 M	1,310,592	$204.2 M
2012	8,143,510	$1,534.6 M	2,256,696	$202.5 M
2013	8,299,472	$1,495.2 M	3,259,042	$225.8 M
2014	8,659,188	$1,899.6 M	4,257,693	$223.5 M
2015	8,801,282	$1,280.4 M	4,812,983	$187.7 M
2016	8,099,218	$578.8 M	5,263,973	$175 M

*Million Cubic Feet

Over the past six years, Texas' production has substantially outpaced Pennsylvania's, accounting for their higher severance tax revenues. Contributing factors include:

- Greater reserves & favorable geology
- Established infrastructure
- Business-friendly tax environment
- Reasonable & predictable regulatory regime

It should be noted that this chart does not reflect full tax burden, which impacts overall industry revenue contributions.

[6] U.S. Energy Information Administration – Natural Gas Gross Withdrawals and Production (includes conventional and unconventional natural gas production)

To underscore Texas' production and competitive advantage over Pennsylvania, one must only read the nationally reported investment trends. Here's an excerpt from Oil Price[7], an oil and gas industry news source:

> "The oil industry invested more than $28 billion in buying up land in the Permian Basin in 2016… That accounted for about 39 percent of all money spent on land acquisitions in the U.S. oil industry last year. Other shale basins do not even come close to that level of investment. By way of comparison, the Marcellus Shale attracted 10 percent of total land investment in 2016…"

Part of the reason cited for this investment was superior geology, but another was the fact that, "Texas is a friendly place for oil companies. West Texas has seen drilling for decades, which means that pipeline networks are established and wells connected."

If we want to reach our full revenue potential in the Commonwealth, instead of focusing on taxation, we must examine the factors leading investment away from Pennsylvania.

Lack of Infrastructure & Price Disparity

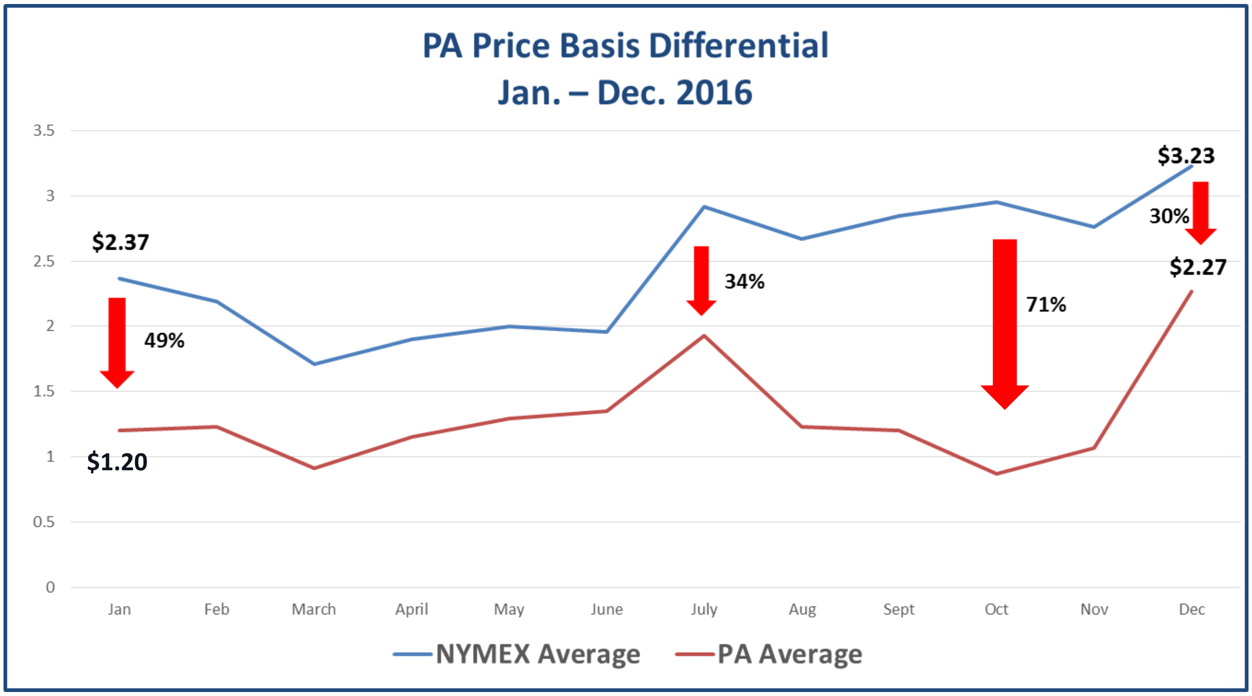
One of the most significant challenges Pennsylvania's natural gas market faces is the lack of adequate infrastructure to gather, process and transport natural gas to market. As a result, over the past four to five years, we have seen a separation between the price received for natural gas in Pennsylvania compared to other basins[8] across the United States. Unfortunately, this price differential has driven capital investment to other states, to the detriment of Pennsylvania.

While the United States has been in a period of historically depressed natural gas prices, due to massive increases in production across the nation as well as global market trends, this low-price environment is exacerbated in Pennsylvania. For example, for calendar year 2016 Pennsylvania producers averaged approximately $1.31/MCF[9], while the average price realized across the

[7] U.S. Shale Sees Rebound in 2017… But Mostly From The Permian, Oil Price, February 1, 2017
[8] Key basins are located in, but not limited to, states such as Texas, Louisiana, Wyoming, Oklahoma, Colorado & Arkansas
[9] Weighted average price for Dominion South, Leidy Hub and Tennessee Zone 4 – Platts Inside FERC

nation was approximately $2.46/MCF[10]. This means that Pennsylvania producers received, on average, only 53% of the national average price for natural gas.

This disparity reached its greatest divergence in October 2016 when Pennsylvania producers received, on average, 71% *less* for their natural gas than received in other basins. Price fluctuation and disparity for calendar year 2016 is referenced in the chart below:



The price disparity seen in Pennsylvania in 2016 equates to approximately $5.75 billion in lost revenue to producers and royalty owners, and translates to lost revenue for the Commonwealth in lower income taxes and impact fee revenues due to delayed or reduced drilling activity.

Infrastructure development must be a priority if we are going to position Pennsylvania to attract capital investment which in turn leads to greater revenues for the Commonwealth. Without proper infrastructure, Pennsylvania will continue to lose opportunities for economic development, job creation and the resulting revenue generation.

[10] NYMEX Natural Gas Contract Settlement Price History – Greenhouse Services Foundation

Regulatory Hurdles Make Pennsylvania Uncompetitive

At a time of historically low commodity prices, with Pennsylvania having the most depressed natural gas markets in the country, industry's cost to operate in the Commonwealth increased by 30% under the new Chapter 78 regulatory package that took effect last year. As the industry begins to recover nationally and multi-billion dollar investments are being made in other basins, industry continues to feel tremendous regulatory pressures here in Pennsylvania that hinder our ability to attract capital.

One of the chief problems facing the natural gas industry is the permitting challenges with DEP. As demonstrated below, there are vast disparities by regional office in the average processing time for expedited ESCGP-2 permits – the erosion and sediment control general permit required for earth disturbance activities and the main permit necessary for well pads, pipelines and related infrastructure projects.

Per DEP's policy, applications for projects that qualify for this permit must be prepared and certified by a licensed professional, such as an engineer or surveyor. When the professional places his or her professional seal on the permit application and submits it on behalf of the operator, DEP has 10 business days to review the application to ensure it is "complete and technically adequate." The permit application must then be reviewed – and the permit issued – within 14 business days. In some instances, however, permit reviews take *more than a year* to process.

- **Southwest Regional Office (January 2015 – March 2017)**
  - ✓ New Well Pads Issued/ Pending: 217 days/ 146 days
  - ✓ New Pipeline Permits Issued/ Pending: 138 days/ 146 days

- **Northcentral Regional Office (January 2015 – March 2017)**
  - ✓ New Well Pads Issued/ Pending: 54 days/ 37 days
  - ✓ New Pipeline Permits Issued/ Pending: 61 days/ 18 days

- **Northwest Regional (January 2015 – March 2017)**
  - ✓ New Well Pads Issued/ Pending: 148 days/ 65 days
  - ✓ New Pipeline Permits Issued/ Pending: 102 days/ 18 days

This is a problem unique to Pennsylvania; it is not an issue in Ohio, West Virginia, Texas or other states against which we are competing for limited capital resources. When companies cannot get simple earth disturbance permits in a timely and predicable manner, it can impact where they choose to invest their capital.

Another issue of concern seemingly endemic to Pennsylvania is the constant regulatory assault that makes it nearly impossible to know the rules of engagement and can raise the cost to operate without any identifiable environmental benefit.

The latest example is burdensome new air quality permits for which DEP has not outlined a need, their authority to require such permits or a commensurate environmental benefit. DEP is revising an existing air quality permit for midstream operations that are considered "minor air contamination facilities" (GP-5) and establishing a *new* air quality permit for well pads (GP-5A) in order to regulate methane emissions. They are doing so despite the rigorous standards DEP already has in place and with which industry is complying – all of which already benefit Pennsylvania's air quality. Indeed, DEP's own data demonstrates that methane emissions from oil and gas systems have *decreased* since 2009[11] – despite a *977% increase* in production[12].

Besides the fact that there are already standards in place *that are working*, there also is a question whether DEP has the legal authority to regulate methane emissions. Further, there is a serious question of whether DEP can impose new standards through permit conditions as opposed to through a rulemaking process under the Regulatory Review Act.

Companies compete internally for limited capital resources – both nationally and, in some cases, internationally. With an unpredictable maze of regulations and permit delays that have become Pennsylvania's hallmark, it is no surprise that capital is diverted to jurisdictions that are more welcoming and profitable.

[11] PA DEP Secretary McDonnell Letter to Senators Scarnati, Corman & Yaw (February 24, 2017)
[12] 288.1 BCF (2009) v 3,100 BCF (2013) – PA DEP Natural Gas Production Data

To change a currently predictable tax structure only adds to the perception that Pennsylvania is not a friendly place to do business. Such short-sighted actions have consequences, and those consequences are not good for Pennsylvania's long-term economic potential.

Conclusion

A conversation about natural gas development is a conversation about Pennsylvania's economic future. We are sitting on a world-class resource, but if we do not address the problems that are holding us back, we will continue to lose capital investment and opportunities to other states and countries where the cost to operate is cheaper and the rules to operate are more reasonable and predictable.

We stand on the verge of a manufacturing renaissance that will grow our economy and provide employment opportunities for generations of Pennsylvanians. By focusing on policies that capitalize on these long-term opportunities, only then will Pennsylvania see a significant and meaningful boost to its revenue challenges.

In short, growing the industry and the downstream opportunities should be the strategy; raising the cost to do business in Pennsylvania is not.

We look forward to partnering with you on this endeavor and welcome your questions.

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May 22. 2017

Testimony of Todd Stager. PE, Pennoni
House Democratic Policy Committee
Hearing on Marcellus Shale Severance Tax

Mr. Chairman and members of the committee,

Pennoni is a multidiscipline engineering consulting firm headquartered in Pennsylvania that has been in business for over 50 years and has grown to over 1,200 professionals. Pennoni is consistently ranked in the top firms by the national Engineering News Record. Pennoni provides services to many markets, including commercial/retail, design-build/P3, education, emergency response, energy and sustainability, government, healthcare, pharmaceuticals, industrial, infrastructure, international, leisure and entertainment, mining and mineral processing, and residential.

In 2009, Pennoni started providing engineering services to the Oil and Gas industry from its six (6) offices located in and adjacent to the Marcellus Shale formation. Those offices are located in Uniontown, Pittsburgh, State College, Wyoming Valley, Lehigh Valley and Mechanicsburg. Revenue and number of staff for these offices grew as a result of the oil and gas industry.

After the boom and starting around 2011, work in the Oil and Gas industry stabilized and was consistent for about four years. Starting around the end of 2015, we noticed a downturn in the industry due to the sharp decline in oil prices which led to the decline of investments by Exploration and Production (E&P) companies. Our revenue from E&P companies decreased 70% from 2015 to 2016. This year, our revenue from E&P companies has decrease to 1% of what it was in 2014. Even the Department of Environmental Protection (DEP) recognizes this downturn in their 2016 Oil and Gas Annual Report which states that “The number of unconventional drilling permits issued in 2016 decreased 59% since 2014.”

With the national market slowdown, companies are closely watching their return of investment, and of the many states with shale production, Pennsylvania is notorious for having a high cost to operate. Pennsylvania continues to experience the most depressed market prices in the country, which has led companies to invest in more productive states. In part, external market forces are to blame, but in Pennsylvania, there are regulatory problems that must be addressed as they are exacerbating this national phenomenon, which has put our state at a major competitive disadvantage.

Currently, it takes DEP’s Southwest Regional Office 100, 200, 300+ days to process permits that should take less than a month to approve. When permits are not processed, major projects are held up and supply chain opportunities pushed back or lost entirely. Additionally, DEP is singling out the Oil and Gas industry for onerous new regulations that the department is inserting into two air quality general permits. The Oil & Gas industry continues to implement state-of-the-art environmental protection across their operations. DEP’s 2016 Oil and Gas Report states that “although the number of compliance inspections has increased over the past six years, the number of violations observed has been generally decreasing over this same time period.” When DEP continues its barrage of costly regulations for which the department has failed to disclose commensurate environmental benefit, those regulations only serve to increase the cost to operate and make Pennsylvania less competitive with other energy states. As capital shifts to more cost-effective environments, we lose opportunities in PA. And that costs opportunity for Pennoni and the Pennsylvania employees like myself who depend on this industry.

The Industry already pays a gas tax called the impact fee, which has generated more than $1 billion in new revenue for communities, environmental and conservation programs and state agency budgets that oversee natural gas development.

Focusing on raising the cost to do business through higher taxes will only cost Pennsylvania investment, revenue and jobs. Our rich supply of natural gas resources is located in close proximity to major energy markets, presenting a distinct opportunity to expand our state's economy. However, if Pennsylvania wants to be a global competitor for major capital investments, it must become more competitive. Instead of focusing on raising industry's cost to operate in Pennsylvania, lawmakers should consider the issues that must be resolved to make the state competitive with other shale plays around the country and the world. Pennsylvania can once again be a leader in manufacturing resulting in more good-paying jobs, higher wages and increased revenues for our Commonwealth, but that will be dependent on lawmakers working with the industry to create the policies that will make this a reality.

Pennoni's goal is to grow our business and provide opportunities to our employees. Raising the cost to do business on this industry is a threat to this goal. The severance tax on top of the impact fee will not help this industry and it won't help Pennoni.

Thank you for allowing me to provide testimony, and I look forward to answering your questions.

Todd M. Stager

Todd Stager, PE
Associate Vice President

PA Chamber™
of Business and Industry

Testimony

Submitted on behalf of the
Pennsylvania Chamber of Business and Industry

Public Hearing on Marcellus Shale Severance Tax

Before the:
House Democratic Policy Committee

Presented by:
Kevin Sunday
Director, Government Affairs

Harrisburg, PA
May 22, 2017

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Thank you for the opportunity to testify before you this morning. My name is Kevin Sunday, director of government affairs for the Pennsylvania Chamber of Business and Industry, the largest, broad-based business advocacy association in the Commonwealth. The serious fiscal and economic conditions facing this state demand our attention and collaboration, and only by enacting pro-growth policies will we be able to solve these issues. Punitive higher energy taxes in the form of a severance tax on the natural gas industry will not solve the state's budget woes or send a message to those looking to invest that Pennsylvania is open for business. Higher energy taxes will only worsen Pennsylvania's already burdensome tax climate.

Economic Growth, Not Higher Taxes, Should Be the Focus of Policy Development

Given persistent budget challenges, low-growth forecasts and a rapidly aging population, we need to focus our attention on policies that will drive job creation and spur economic growth. We commend the work of the Wolf administration and DCED Secretary Davin for contracting with IHS Markit to develop the report, "Prospects to Enhance Pennsylvania's Opportunities in Petrochemical Manufacturing." The report forecasts a potential for an additional $3.7 billion in investment in natural gas liquids assets in the state. We concur with the report's recommendation that the state be "aggressive" in securing additional build-out of natural gas infrastructure. There are several billion dollars of investment being proposed in terms of major pipeline transmission projects, such as Atlantic Sunrise ($3 billion), PennEast ($1.2 billion) and Mariner East 2 ($2.5 billion). These massive investments represent generational opportunity to the thousands of Pennsylvanians employed in the manufacturing and skilled trades who are employed all along the energy supply chain – from getting the energy out of the ground to moving the molecules to market to using them in feedstock. It would be an abject failure to set aside this generational opportunity for the sake of higher energy taxes.

Instead, the conversation should be about how best to maximize this opportunity in a manner that grows the entire economy. When there is economic growth, it naturally follows that tax collections will rise. When onerous tax policies are instituted, job loss will follow. It should be no wonder that April revenue collections were as dismal as they were after Pennsylvania saw higher month-over-month unemployment numbers for the first eight months of 2016. In July of 2015, the state's unemployment rate surpassed the national average and has been above it ever since. The lost jobs over the past several years have been concentrated in the blue-collar construction, skilled trades and mining industries. In fact, as the chart from Bloomberg below shows,[1] Pennsylvania holds the dubious distinction of being host to all or part of four of the top ten metro areas that saw the biggest reduction in non-farm payroll employment in 2016. A severance tax would do nothing to reverse this trend.

[1] Want a Job? Go West (and South). Justin Fox, Bloomberg View, Jan. 25, 2017. https://www.bloomberg.com/view/articles/2017-01-25/want-a-job-go-west-and-south The article analyzed year-over-year data made available from the United States Department of Labor Bureau of Labor Statistics, available at https://www.bls.gov/web/laus.supp.toc.htm.

We also agree with the recommendation from the IHS Markit report that the state undertake a serious and comprehensive overhaul of its workforce development strategy. Workforce development remains a priority for the Pennsylvania Chamber of Business and Industry, as our members, in all manner of industrial sectors, continue to report chronic difficulty in their ability to find properly skilled and trained workers.

Pennsylvania's Already Burdensome Tax Climate Will be Worsened with the Enactment of a Severance Tax

Specifically in regard to tax policy, we must again note that Act 13 of 2012 established a tax policy with respect to natural gas development by assessing fees on every unconventional well drilled in the state. To date Act 13 has directed more than $1 billion in funding, the majority of it to local communities in all 67 counties, for emergency response, environmental protection, land conservation, and public safety. These impact fee levies are in essence a tax on natural gas activity and were established only after Gov. Corbett convened a multi-stakeholder advisory commission that forwarded dozens of recommendations about how to protect public health and the environment, meet workforce needs, and protect landowner interests in addition to growing state and local revenues. The Governor's Marcellus Shale Advisory Commission rightly recognized that any proper dialogue about the policy involving the gas industry needed to be conducted with a broader view beyond revenues from extraction, exploration and development.

More broadly Pennsylvania's tax climate remains relatively uncompetitive, with a 24th ranking among states, according to the Tax Foundation.[2] Higher energy taxes will not improve our state's ranking or ability to attract and retain business; it will worsen it. Our state's corporate net income tax effective rate is the highest in the country, and several major energy producing states, such as Texas and Wyoming, do not have income taxes. According to an analysis of the most recent data available by the Council on State Taxation,[3] only five other states in the nation collected more total taxes from business in 2015 than Pennsylvania, which collected more than $27.6 billion in total from businesses. The same analysis noted only five other states collected more corporate taxes from business than Pennsylvania, and only two other states collected more individual income taxes on business income than Pennsylvania. Revenue collections in Pennsylvania are driven largely by personal income tax and sales tax collections, which combined comprise about three-quarters of all revenues in the state. Of these, it is estimated businesses pay approximately half of all sales taxes and more than forty percent of total PIT collections.

Higher Energy Taxes Will Reverse the Significant Downward Trend in Electric and Gas Utility Costs for All Pennsylvanians

If a severance tax is enacted, there will also be an impact on everyone in the state who pays a utility bill, meaning that we will diminish what should be our strongest selling point to companies looking to invest in the state: readily available and affordable energy. In a recent report, "Analysis of Revenue Proposals in the 2017-18 Executive Budget," the state's Independent Fiscal Office calculated effective tax rates for existing severance taxes in leading natural gas producing states across the country, in addition to Gov. Wolf's 6.5% proposal, which would maintain the Act 13 impact fee. The IFO noted that the effective rate of Gov. Wolf's proposal would be 9.0%, nearly double that of any other major natural gas producing state. The report also estimated residential, commercial and industrial ratepayers in Pennsylvania would face higher gas and electric utility bills in Pennsylvania should Gov. Wolf's proposal be enacted. At present, Pennsylvania's corporate net income tax effective rate is the highest in the nation.

[2] 2017 State Business Tax Climate Index. Tax Foundation, Sept. 28, 2016. https://taxfoundation.org/2017-state-business-tax-climate-index/
[3] Total state and local business taxes: State-by-state estimates for fiscal year 2015. Council on State Taxation, State Tax Research Institute and Ernst and Young, December 2016. http://www.cost.org/WorkArea/DownloadAsset.aspx?id=94697

The proliferation of natural gas activity in the state has led to the creation of tens of thousands of direct and indirect jobs and has helped save families and businesses, in aggregate, millions of dollars in gas and electric utility costs over the years. According to PUC data, the major gas utilities have been approved for rates that are currently 62% to 82% less than what they were ten years ago, when natural gas drilling in the Marcellus play began in earnest. According to data from the PJM Interconnection, the grid operator for thirteen states (including Pennsylvania), current wholesale prices in the PJM markets are 40% less than they were in 2008. PJM's real-time energy market prices "were lower in 2016 than at any time in PJM history since the beginning of the competitive wholesale market on April 1, 1999."[4] As the independent Energy Information Administration notes, "wholesale electricity prices are closely tied to wholesale natural gas prices."[5] The following chart makes that clear, with the increase in gas production volume commensurate with decreasing PJM prices. It must also be noted that many operators in Pennsylvania have sold gas in recent years at a significant discount to NYMEX pricing.

Year	PA Natural Gas Production (bcf)[6]	NYMEX Average Natural Gas Settling Price (May) $/Dth	PJM Wholesale Electric Prices[7] $/Mwh
2008	198	$11.28	$85.00
2009	273	$3.32	$55.66
2010	572	$4.27	$66.93
2011	1,310	$4.38	$63.21
2012	2,256	$2.04	$49.22
2013	3,259	$4.15	$53.93
2014	4,257	$4.80	$71.50
2015	4,812	$2.52	$56.88
2016	5,264	$2.00	$49.99

Prolific natural gas production has resulted in significant decrease to gas utility customers. The following table charts clearly the savings to customers as a result of developing the state's gas resources.

Purchased Gas Cost Rates ($/Mcf)[8]

	NFG	PGW	Columbia	UGI	PECO
2008-09	$10.86	$13.02	$15.93	$13.26	$13.15
2009-10	$9.39	$7.18	$5.73	$9.88	$7.09
2010-11	$5.03	$6.51	$5.66	$9.16	$6.82
2011-12	$6.05	$6.09	$7.22	$8.49	$5.00
2012-13	$4.82	$4.71	$4.16	$6.38	$5.49
2013-14	$5.24	$6.07	$4.81	$6.70	$6.07
2014-15	$6.18	$6.56	$5.09	$6.43	$5.72

4 2016 State of the Market Report for PJM. Monitoring Analytics LLC, May 9, 2017. http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2016/2016-som-pjm-sec1.pdf

5 Electric Monthly Update: Regional Wholesale Markets. U.S. Energy Information Administration, February 2017. https://www.eia.gov/electricity/monthly/update/wholesale_markets.cfm

6 Natural Gas Gross Withdrawals and Production. U.S. Energy Information Administration, May 2017. https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm

7 2016 State of the Market Report for PJM. Monitoring Analytics LLC, May 9, 2017. http://www.monitoringanalytics.com/reports/PJM_State_of_the_Market/2016/2016-som-pjm-sec1.pdf

8 Purchased Gas Cost Rates. Pennsylvania Public Utility Commission, accessed May 16, 2017. http://www.puc.state.pa.us/NaturalGas/pdf/PGC.pdf. Please note the PGC rates are those in effect at the start of the year and are subject to quarterly adjustments to reflect rate increases or decreases; in many cases, the PUC will approve rate decreases in a given quarter.

2015-16	$3.10	$4.17	$4.68	$4.85	$3.53
2016-17	$1.92	$3.21	$3.64	$5.06	$3.41
Change since 08-09	***-82%***	***-75%***	***-77%***	***-62%***	***-74%***

As a result of these reductions in costs, businesses and consumers of all income classes have saved countless millions of dollars in costs. Any policy that would restrict gas production would begin to reverse that trend.

* * * * *

In summary, at a time when our state needs economic growth more than ever, we urge this committee and, more broadly, the General Assembly and Wolf administration to concentrate their attention not on even higher taxes but on policies that will encourage job creation and drive economic growth. The increased production and use of natural gas has been a major economic driver in the state in recent years, and the embrace of developing new markets in this state and of new and expanded infrastructure build-out will help us more fully secure the generational opportunities before us.

Testimony of Robert C. Altenburg
Before the House Democratic Policy Committee
May 22, 2017
Natural Gas Extraction Tax and the Polluter-Pays Principle

Good Morning Chairman Sturla and members of the Committee.

My Name is Robert Altenburg. I represent Citizens for Pennsylvania's Future (PennFuture), a statewide environmental advocacy organization dedicated to protecting the Commonwealth's environment and advancing Pennsylvania's transition to a clean energy economy.

Pennsylvania is the only gas producing state that doesn't implement a severance tax.

Industry advocates are quick to characterize a change from that status quo as the government "picking winners and losers" but, this overlooks the significant subsidies that already benefit fossil fuels. Market-based solutions can be successful, but the invisible hand of the market can't ensure the best outcome for our citizens when the true costs of fossil fuel extraction isn't reflected in the price. In the words of Nobel-laureate economist Joseph Stiglitz, the invisible hand is often invisible because it isn't there in the first place.

From PennFuture's perspective, implementing a severance tax is a common-sense application of *the polluter pays principle*. We should account for the environmental and public health costs of industrial projects like natural gas extraction and adequately fund protections of our water, land, air, and climate, through fees paid by the industry. To do less means that the citizens of Pennsylvania are subsidizing the costs of pollution and thus making it more difficult for alternatives such as clean renewable energy to compete.

In some cases, the subsidy is obvious: For years, the industry has benefited from an air permit exemption for gas wells, and since there are no permits there are also no permit fees, but DEP staff and resources must still implement the program. DEP has proposed eliminating this exemption, but the industry is out in force fighting such changes. They want fewer permits, and they want to receive the permits they do get faster, but it's often someone else who pays.

In some cases, the subsidy is hidden: When air pollution causes children to have asthma attacks, parents often miss work to care for them. On top of the suffering of the children and the medical bills paid by their parents, their employers lose productivity as well. The bills get paid, but since the polluter doesn't pay, there is less incentive to avoid the pollution.

These are only two examples, but subsidies are pervasive. Research PennFuture commissioned in 2015 cataloged $3.2 billion in annual subsidies provided each year by Pennsylvania to fossil fuels—this was a partial list that didn't account for environmental and public health impacts or the federal subsidies. The reaction from fossil fuel advocates though was telling. They expressed shock that we were counting tax loopholes as subsidies. Tax breaks or preferential treatment, known collectively as tax expenditures, are not only subsidies, they are often the best kind of subsidies a business could hope for.

For example, Act 4 of 1999 exempted natural gas company and utility sales from the gross receipts tax while continuing to subject electric utilities to the tax. That makes gas more competitive compared to electricity, and it can influence consumer purchasing decisions that may further lock in gas use for decades. This loophole likely reduces state revenue by more than $100 million every year.

On the other hand, compare that to the PA Sunshine program. There, $100 million in rebates encouraged more than half a billion dollars' worth of investment in solar deployment. The program was a success, helping more than 8,000 homes and small business go solar, but like many such programs, it only lasted for a little more than four years before the funds were exhausted and the program ended. This on-again off-again nature of such investments is difficult for businesses—particularly small installers—to cope with. By the time new employees are hired and trained, the additional incentives may be gone.

The natural gas exemption from the gross receipts tax is no less a subsidy than the PA Sunshine program, but it's far more expensive and longer lasting. Its funds are never exhausted, gas companies have reliably planned on receiving this benefit for years, and the taxpayers that made up the lost revenue elsewhere never see the bill since state budget documents don't even track the ongoing amount of this expenditure.

We would like to be clear that while we do support an extraction tax for natural gas, that support is contingent on adequate funding for environmental protection and remediation. Article I section 27 of Pennsylvania's Constitution mandates that our public natural resources are the property of the people. The Commonwealth is the trustee with a duty to conserve and maintain those resources for the benefit of the people. Pennsylvania's ongoing failure to ensure adequate funding for environmental protections is a breach of that fiduciary responsibility. An extraction tax on natural gas could go a long way to correcting this error. Thank You.

energy API

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TESTIMONY OF

STEPHANIE CATARINO WISSMAN, EXECUTIVE DIRECTOR

ASSOCIATED PETROLEUM INDUSTRIES OF PENNSYLVANIA

MAY 22, 2017

BEFORE THE HOUSE DEMOCRATIC POLICY COMMITTEE

Chairman Sturla and members of the House Democratic Policy Committee, on behalf of the Associated Petroleum Industries of Pennsylvania (API-PA), a division of the American Petroleum Institute (API), thank you for the opportunity to submit comments for the record regarding the proposals to enact an additional energy tax, also referred to as the severance tax.

API is the only national trade association representing all facets of the oil and natural gas industry, which supports 9.8 million U.S. jobs and 8 percent of the U.S. economy. API's more than 625 members include large integrated companies, as well as exploration and production, refining, marketing, pipeline, and marine businesses, and service and supply firms. They provide most of the nation's energy and are backed by a growing grassroots movement of more than 40 million Americans.

API is also a standard setting organization. For 90 years, API has led the development of petroleum and petrochemical equipment and operating standards. These standards represent the industry's collective wisdom on everything from drill bits to environmental protection and embrace proven, sound, engineering and operating practices and safe, interchangeable equipment and materials for delivery of this important resource to our nation. API maintains more than 650 standards and recommended practices (RPs). Many of these are incorporated into state and federal regulations.

Today, the U.S. leads the world in the production and refining of oil and natural gas. This has resulted in positive benefits for American consumers by driving energy costs down and has also benefited our environment. In fact, clean-burning natural gas has driven carbon emissions from power generation to their lowest levels in nearly 30 years.

API-PA members oppose additional energy taxes on the industry, not just the governor's severance tax proposal. Increasing energy taxes is simply bad public policy. This is the third attempt by the Wolf Administration to implement an additional severance tax on Pennsylvania's natural gas industry.

The Administration should look at ways to promote public policies that expand Pennsylvania energy leadership rather than place a punitive tax on the industry that would harm consumers and tens of thousands of jobs in Pennsylvania. Rather than calling for another severance tax, we can work together to help provide affordable and reliable energy needed to run households and businesses all over the commonwealth.

It is high time to call the impact fee what it really is- a severance tax. It was called a local impact fee for a variety of reasons; but, regardless of what it's called the effect is the same- helping communities, counties and local governments. Not only does the local impact tax help local communities, it also helps support government programs, including Conservation Districts, the Department of Environmental Protection, the Environmental Stewardship Fund, housing programs, and environmental grant programs.

Pennsylvania is the only state that requires an additional impact tax that is collected from every shale well drilled in the state. Since the enactment of Act 13 of 2012, the impact tax has distributed more than $1 billion, the bulk of which goes directly to local communities. Pennsylvania's Independent Fiscal Office projects that market conditions will result in lower revenues this year; however, recent history has shown that even in a down year for the industry, revenue to the commonwealth is expected to be over $187 million.

Investing in pipeline projects throughout Pennsylvania would bolster the impact tax, allowing currently shut-in gas to get to market, thereby increasing tax collections, this way, all Pennsylvanians benefit by increased impact tax investments and the environmental benefits of increased natural gas usage.

This debate isn't about paying one's fair share or doing one's part; it's about targeting a single industry to pay more. The short-sighted goal of instituting additional energy taxes misses the point of what's at stake. It ignores economic reality, puts good family sustaining jobs in peril, and jeopardizes the future prosperity of Pennsylvania. There is often failure to understand fundamental-yet crucial- economic facts. Capital is movable and will go where the return on investment has the greatest potential. Economic facts remain consistent: capital is movable and seeks a return on investment. It is a complete fallacy to say that "the gas is here and companies are not going to leave." The fact is that some companies have had to decrease their workforce and reduce their capital expenditures in Pennsylvania.

Resources are not unlimited. The fact is that within any given company, there is a finite amount of capital for investment. And, each project that requires a capital expenditure has to compete for those investment resources against other opportunities that a company might have. In this case, capital investment in Pennsylvania is competing against other shale plays and other states with highly developed infrastructure and favorable fiscal policies.

The cost to drill a shale-gas well in Pennsylvania is the highest in the nation, averaging $582 per foot of well drilled, compared to just $279 in Utah[1]. This cost varies across states for a variety of reasons, such as the depth of the well drilled, or the geology of the basin being explored and developed, or the tax and regulatory regime in place. Policymakers need to consider the overall competitive forces when planning to make changes in energy policy. In this strained low-price environment and with Pennsylvania's already high drilling costs, raising taxes on producers would stifle economic growth and the tax revenue generated from it.

An additional energy tax makes investment decisions more difficult and places Pennsylvania further at a competitive disadvantage. No matter how hard the proponents try to spin that the industry can "afford" a severance tax, the economic reality cannot be denied. Capital is movable and seeks the greatest return on investment.

Pennsylvania is an epicenter of America's energy renaissance. Thanks, in large part, to the production happening throughout Pennsylvania, household budgets across the nation grew in 2015 by $1,337 due to utility and other energy-related savings in 2015. Sitting atop the prolific Marcellus and Utica shale plays, Pennsylvania is a natural gas production powerhouse – thanks to modern hydraulic fracturing and horizontal drilling. It is hard to decipher the public policy rational that intentionally jeopardizes Pennsylvania's potential by adopting additional energy taxes. The U.S. Energy Information Administration reports that the two plays provided 85 percent of U.S. shale gas production growth since the start of 2012, reflecting the blossoming production from shale and other tight-rock formations through safe development. Why would Pennsylvania risk throwing this all away with instituting additional taxes on energy?

This debate comes down to one issue, competitiveness. Does Pennsylvania want investment here or elsewhere? The choice should be clear.

Thank you for your consideration.

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[1] American Petroleum Institute, Independent Petroleum Association of America, Mid-Continent Oil & Gas Association, "Joint Association Survey on 2014 Drilling Costs" December 2015

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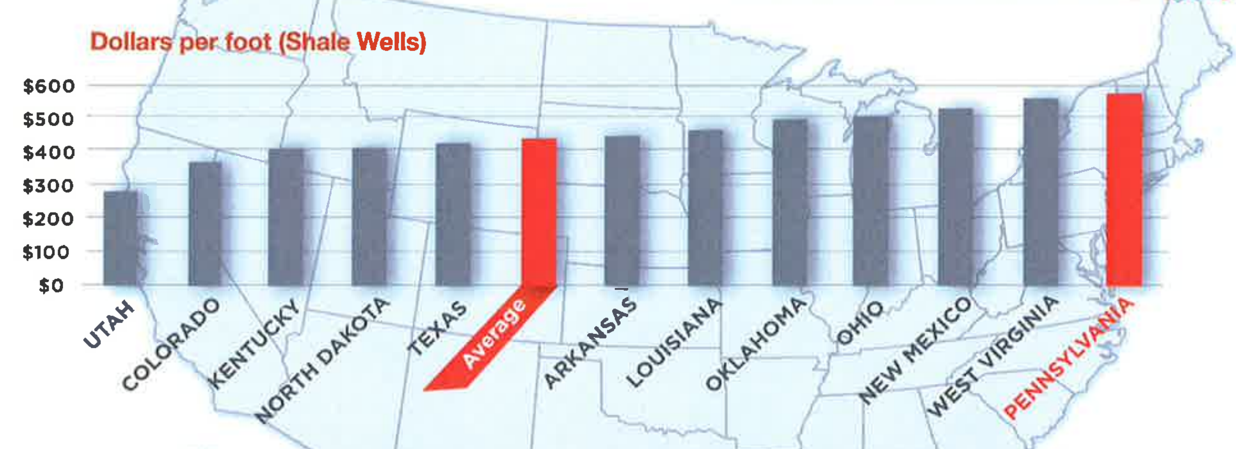
AMERICAN PETROLEUM INSTITUTE

2017 API SURVEY

$ THE COST TO DRILL SHALE-OIL AND SHALE-GAS WELLS

The cost to drill shale-oil and shale-gas wells varies across states for a variety of reasons, such as the depth of the well drilled, or the geology of the basin being explored and developed, or the tax and regulatory regime in place. **Policymakers need to consider the competition when planning to make changes to energy policy.**



In 2014 the oil and gas industry spent $69.9 billion dollars drilling over 158 million feet of shale wells.		AVERAGE*
Utah	$279	
Colorado	$367	
Kentucky	$410	
North Dakota	$418	
Texas	$424	
Arkansas	$443	$441
Louisiana	$466	
Oklahoma	$495	
Ohio	$515	
New Mexico	$529	
West Virginia	$570	
Pennsylvania	$582	

NOTE: *Represents average of reported Joint Association Survey shale wells, excluding sidetrack wells.

Source: American Petroleum Institute, Independent Petroleum Association of America, Mid-Continent Oil & Gas Association, "Joint Association Survey on 2014 Drilling Costs" December 2015

Sierra Club testimony

Before the House Democratic Policy Committee

May 22, 2017

Good morning, members of the committee. My name is Thomas Au. I am conservation chair for the Pennsylvania Chapter of Sierra Club and also chair of its oil and gas committee. I have been following Marcellus Shale issues for the Sierra Club since 2006.

I served as the Sierra Club's representative to the Citizens Marcellus Shale Commission, when it was formed in 2011. We heard testimony from citizens at five public forums across the Commonwealth and issued an extensive report on unconventional shale gas drilling and production issues. The report is still relevant today; I commend this report to you. The 2011 report made several recommendations on increasing revenue from oil and gas production, including enactment of an extraction tax, restoring local governments' ability to assess the value of oil and gas reserves for local property tax purposes, and eliminating the exemption for natural gas from the gross receipts tax. These are important steps to reforming an unbalanced tax system.

Production is increasing from gas fields in Pennsylvania. Last year, 5.1 trillion cubic feet of shale gas was produced from 7100 wells. That is up from the 4.6 trillion cubic feet produced in 2015. And production will continue to increase because many wells drilled have yet to be put into production. Even as gas production has boomed, direct tax revenues have been falling. Corporate net income tax (CNIT) payments made by drilling companies have fallen to pre-Marcellus drilling levels according to Department of Revenue compiled data. In 2013, oil and gas producers paid just $10.3 million in corporate net income taxes. Meanwhile, the impacts of gas production have fallen on more Pennsylvanians as pipelines spread across the state. We cannot use all the gas currently being produced; therefore gas companies are exploring ways to send it out of state and overseas. As a result, there will be greater impacts on Pennsylvanians who do not live in gas drilling areas from processing, transportation and pipelines.

The reasons we need tax reform related to the oil and gas industry are self evident:

1. The natural resources of the Commonwealth belong to all Pennsylvanians. The process of extracting gas should include a payment for damage to our natural resources. The process not only includes building the well pad, but pumping water from streams and rivers, constructing roads and bridges, building refineries and compressor stations, building pipelines, and discharging wastewater. We the public lose valuable large wilderness tracts in state forests; we lose wildlife habitat in every clear cut; we lose farmland; silt and contaminants run down into our wetlands and streams; previously pristine air is polluted. These are quality of life considerations.

2. Governments subsidize energy development in many ways. By far the biggest way governments reduce the price of energy is by not taxing it enough to account for the external damage that fossil fuels cause to human health and to the climate. The impact fee under Act 13 recognizes that the oil and gas industry places a burden on public infrastructure, such as roads, bridges, emergency response, police, fire and ambulance services. Whether the impact fully compensates counties and municipalities for local services is an open question. Clearly, the revenue from the impact fee is not enough to enable Pennsylvania to keep up with public infrastructure improvements needed for a vigorous economy.

3. There are long term consequences from gas well drilling. According to Key-Log Economics , the total costs to the environment from one pipeline -- the Atlantic Sunrise pipeline project (covering 8 counties) -- is in between $21.3 and $91.6 billion. This cost accounts for lower ecosystem service productivity from the pipeline right of way, from new permanent roads, and from permanent acreage associated with the compressor stations. Not only are there foreseeable consequences, there can be unplanned consequences in terms of accidents, spills, leaks, and permanent impairment of ecosystems . Right now, gas transmission lines are being expanded throughout Pennsylvania, with long term environmental effects on farmland, woodland, and protected conservation areas. In the recent past, residents who receive drinking water from the Monongahela River have had to buy bottled water or boil their water because Marcellus wastewater had caused treatment problems at facilities which take drinking water from the Monongahela River. Were their costs compensated?

Make no mistake - the public pays a price for Marcellus gas development. We are paying for the costs of orphaned and abandoned gas wells now. Pennsylvania taxpayers will be paying for environmental damages that will accrue long after the gas development is over. While there are operating companies in Pennsylvania actively producing gas, we should ensure that our future will not be littered with more abandoned wells. We support legislation establish a severance tax that fully addresses future needs of the Commonwealth. We support legislation which would:

1. compensate agencies and municipalities for performing their duty to protect residents from nuisances arising from gas well drilling and production;

2. adequately compensate the public for all the external costs of this industry;

3. provide funding to compensate for long term environmental damage, while also protecting the state's natural resources.