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By Stephen Herzenberg and Jon White **October 16, 2017**

Natural Gas Producers in PA Don't Pay Their Fair Share

In the past several months, Pennsylvania's legislature has shown renewed interest in enacting a severance tax on natural gas extraction as part of the state's overdue revenue package to fund the state budget. In that context, the natural gas industry has maintained a steady drumbeat of communications claiming that Pennsylvania already has a tax on gas extraction because of its per well impact fee which does not rise with the volume or value of gas drilled. The industry and its allies also continue to claim that Pennsylvania's impact fee amounts to a tax that is higher (relative to the volume or value of gas produced) than the severance taxes in many other states.

This past weekend, for example, a letter to the *Philadelphia Inquirer* from the Marcellus Shale Coalition stated that "As to the tired claims that natural gas producers 'don't pay their fair share'? Pennsylvania's impact fee has generated more than $1.2 billion in new revenue and brought in more last year than the severance tax collections from Ohio, West Virginia, Colorado and Arkansas, combined. Those states, by the way, produced more natural gas than the Commonwealth."

This brief "fact checks" this claim and finds it represents the selective use of data by opponents of a natural gas severance tax. Compared to eight other states including the four cited by the letter:

- Pennsylvania's impact fee in 2016 raised less revenue per volume of gas produced than seven of the other states – all but Ohio.
- Compared to a (gas production volume-weighted) average of the other eight states, Pennsylvania's impact fee raised less than half as much revenue per volume of gas extracted.

This brief also highlights the finding of the Independent Fiscal Office (Office) that Pennsylvania's (lifetime) effective tax rate due to the impact fee is low relative to five of six comparison states with a severance tax, all except Ohio. If Pennsylvania imposed a severance tax of 2.1% to 3.6% it would, combined with the impact fee, have an overall tax rate on gas extraction within the range of these other states.

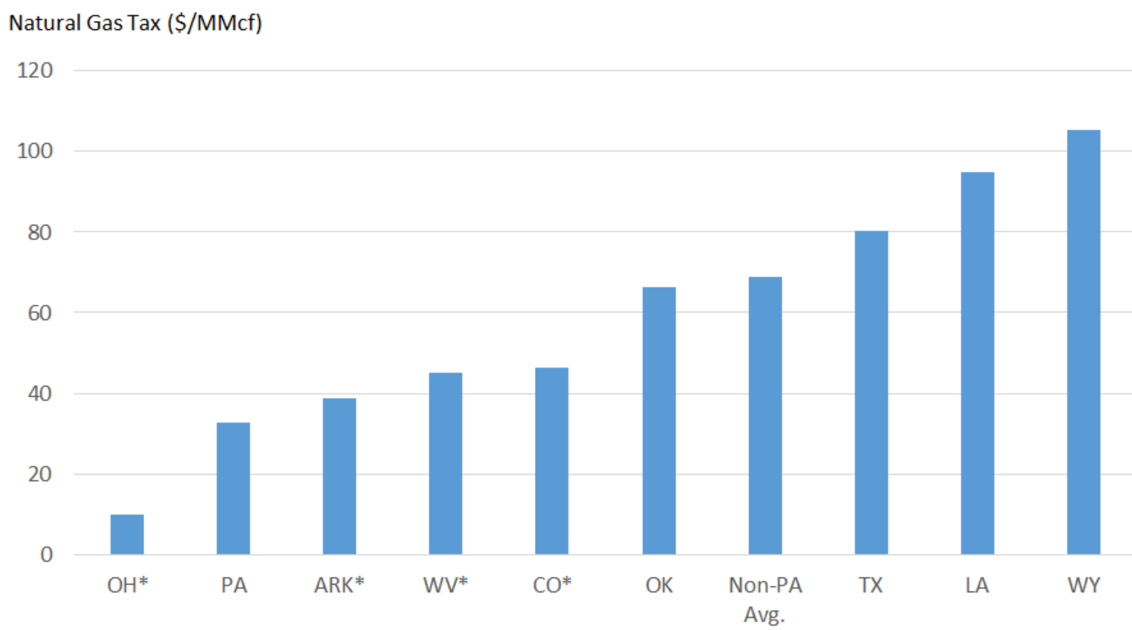
Cherry Picking Data

To fact check the claim made in the *Daily News* we identified the 10 states other than Pennsylvania that extracted the most natural gas in 2016 from the U.S. Energy Information Administration (https://www.eia.gov). For eight of the 10 other states, including AR, CO, OH, and WV, and Pennsylvania, we identified from state sources the revenue from these states' natural gas severance taxes, and from Pennsylvania's impact fee, in 2016.

Table 1 (next page) and Figure 1 show the findings. When it comes to the volume of gas produced, the letter's claim that OH, WV, CO, and AK produced more natural gas than PA in 2016 proves correct – by 1%. When it comes to the revenue collected, it may also be true. While Table 1 shows $187 million collected in these other states versus $173 million from Pennsylvania's impact fee, our source for Colorado did not separate revenue from gas production and from oil production. If oil production accounts for more than $14 million of Colorado's $79 million total in revenue from its severance tax in 2016, the letter's claims are technically correct.

Fig. 1 presents the data for all nine states individually (including PA), and for the eight states other than Pennsylvania in aggregate. It shows that Pennsylvania collected from its impact fee less natural gas tax revenue per volume of natural gas produced than all but Ohio. By grouping Ohio with three states other than Pennsylvania that have the lowest severance taxes per volume of gas produced in 2016, the letter created a "factoid" that is technically correct but misleading.

Figure 1. In 2016, Pennsylvania's Impact Fee Provided Fewer Dollars Per Volume of Gas Than Severance Taxes of All But Ohio



*Indicates state picked by letter writers to the *Philadelphia Inquirer* to compare to Pennsylvania

Sources. See Table 1.

Table 1. Natural Gas Production and Revenue from Natural Gas Taxes in Pennsylvania and Eight Comparison States, 2016				
Date	***2016 Natural Gas Production (MMcf)***	***Statutory Tax Rate for Severance Tax***	***Revenue from Natural Gas ($millions)***	***Revenue ($) per MMcf***
AR*	823,223	5%	$32	39
CO*	1,701,735	4%	$79	46
LA	1,743,259	13.9¢ per McF	$165	95
OH*	1,439,905	2.5¢ per McF	$14	10
OK	2,468,312	7%	$163	66
TX	7,203,012	7.5%	$579	80
WV*	1,375,108	5%	$62	45
WY	1,664,604	6%	$175	105
PA	5,313,258	None (impact fee only)	$173	33
AR, CO, OH + WV	5,339,971		187	35
Four Other States	13,079,187		1,083	83
Eight non-PA States	18,419,158		1,270	69

* Four states that the letter to the *Philadelphia Daily News* claimed had more total gas production than PA and less total revenue from severance taxes than PA's impact fee.

Sources:

For production: https://www.eia.gov/naturalgas/data.php#production; scroll down and click on "Wellhead value & marketed production"

For severance tax statutory rates: Independent Fiscal Office, "Analysis of Revenue Proposals, FY 2017-18 Executive Budget," April 2014, Table 1.5, p. 11; http://www.ifo.state.pa.us/download.cfm?file=/Resources/Documents/Revenue_Proposal_Analysis_April2017.pdf

For revenue from severance tax and impact fee:

AR: Arkansas Department of Revenue (http://www.dfa.arkansas.gov/offices/exciseTax/MiscTax/Documents/monthlyGrossNGS.pdf); (http://www.dfa.arkansas.gov/offices/policyAndLegal/Documents/et2008_4.pdf) For tax rate look at Page 7, Sect. NG-7: Amount and Nature of Gas, Subsection A, 4.

CO: Colorado Department of Revenue (https://www.colorado.gov/pacific/sites/default/files/2016%20Annual%20Report.pdf). Scroll down to page 43 - Colorado reports its severance tax revenue as "Oil and Gas" together.

LA: Louisiana Department of Revenue (http://revenue.louisiana.gov/Publications/AR(15-16).pdf); Scroll down to Page 45 of the 2016 Annual Report, look under "Gas" Column

OH: Ohio Department of Taxation (http://www.tax.ohio.gov/Portals/0/communications/publications/annual_reports/2015_annual_report/2015_AR_Section_2_Severance_Tax.pdf); Scroll down to Page 4. Look at "Table 2. Severance Tax Collections Fiscal Years 2010-2015." The table only shows 2015 revenue because 2016 revenue not yet available; Ohio Department of Taxation says 2016 should be comparable. 2015 natural gas production was 1,007,270 MMcf.

OK: Oklahoma Department of Revenue (https://www.ok.gov/tax/documents/AR2016.pdf); Scroll down to Page 32 of the 2016 Annual Report of the Oklahoma Tax Commission. Look at "Severance Tax on Gas…" The revenue number is for fiscal year 2015/16. Production of natural gas in 2015 was 2,499,599 MMcf, similar to 2016.

PA: PA House Appropriations Committee (http://www.pahouse.com/Files/Documents/Appropriations/series/2960/ImpactFee_BB_061917.pdf); Revenue figure stated in bold in the first paragraph.

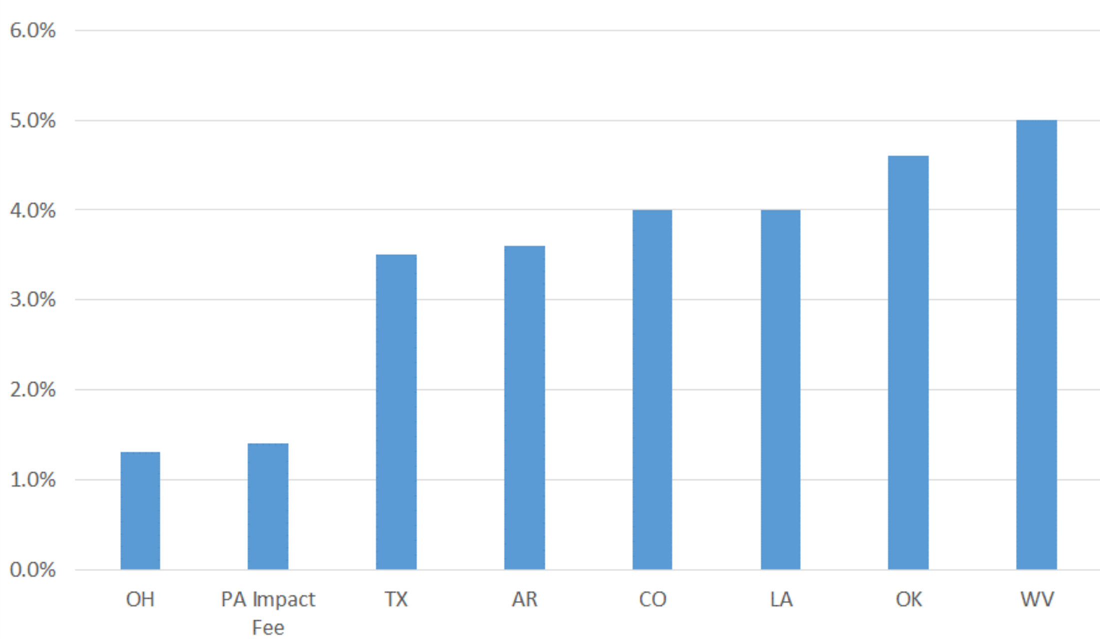
TX: Texas Comptroller (https://comptroller.texas.gov/taxes/natural-gas/). For revenue figure, look at the third of the four bullets that beginning of the article.
WV: West Virginia Department of Revenue (http://tax.wv.gov/Documents/Reports/SeveranceTaxes.TaxData.FiscalYears.2004-2016.pdf). Scroll Down to Page 2 - "Severance Tax Summary FY 2016, look at both "Regular State" and "Local Government".
WY: Wyoming Department of Revenue (https://sites.google.com/a/wyo.gov/wy-dor/dor-annual-reports); Click on 2016 DoR Annual Report, scroll down to Page 52, look at "Estimated Severance Tax Revenue Collectible" for Natural Gas.

Effective Tax Rates (ETRs)

In computing effective tax rates, the Independent Fiscal Office (IFO) notes that “annual ETRs” – revenues collected through a severance tax (or Pennsylvania’s impact fee) divided by the gas produced that year – are volatile because of price changes at regional hubs. It further notes (p. 12) that such annual rates are best used to illustrate historical trends in a state rather than comparisons across states. The IFO (p. 10) therefore recommends using “Lifetime ETRs” – the average effective tax rate over all production years for a newly drilled well.

Figure 2 presents the lifetime ETR as reported by the IFO with Pennsylvania’s impact fee and in six comparison states, including the four states cited by the letter to *The Philadelphia Daily News*. Figure 2 makes clear that Pennsylvania’s effective tax rate with just the current impact fee is above only Ohio (and barely). It is well below half of the ETR in every other state analyzed by the IFO and about one third or less of the tax rate in three of the other six states.

Figure 2. Effective Tax Rate, PA Impact Fee and Six Comparison States with Severance Taxes



Source. Independent Fiscal Office, "Analysis of Revenue Proposals, FY 2017-18 Executive Budget," April 2014, Table 1.5, p. 11; http://www.ifo.state.pa.us/download.cfm?file=/Resources/Documents/Revenue_Proposal_Analysis_April2017.pdf

Pennsylvania Natural Gas Drillers Do Not Pay Their Fair Share

Examining evidence from other drilling states, all of them rather than just those with the lowest severance taxes, indicates that Pennsylvania's natural gas taxes with only a per-well impact fee are low. In fact, of the eight other states we examined, Pennsylvania's natural gas taxes with just the impact fee are lower than the severance taxes in all other states except Ohio. If Pennsylvania lawmakers put in place a severance tax comparable to those in most other drilling states, they can raise several hundred million dollars more annually, an amount that will grow rapidly as natural gas prices for gas extracted in Pennsylvania continue to grow.