

A Look at Other States Shows Marcellus Impact Fee Shortchanges Pennsylvanians

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Overview

Virtually every state in the nation with mineral resources, including natural gas, oil, coal, and even sand, collects revenue from the companies that extract these finite resources. Severance taxes provide these states with an important source of funding for investments in education, colleges, transportation, and other infrastructure that help to build a strong economy.

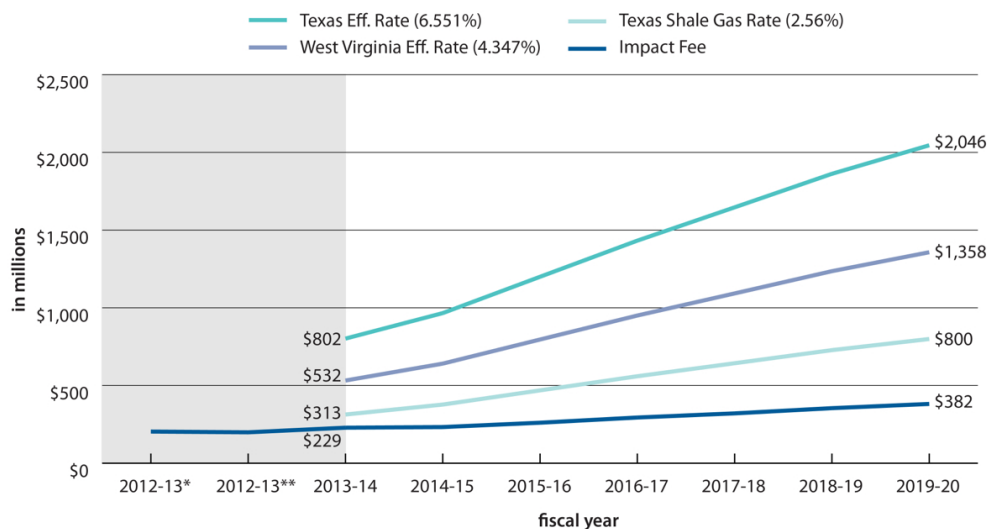
In 2012, Pennsylvania enacted an “impact fee” on natural gas wells drilled into Pennsylvania’s Marcellus Shale that generates a relatively small amount of revenue from the expanding gas industry. Replacing Pennsylvania’s impact fee with a modest 4% severance tax could generate \$1.2 billion annually by 2019-20, three times that of the current fee.¹

Using a “moderate” production scenario — 1,400 new wells per year going forward and gas prices as most recently forecasted by the U.S. Energy Information Administration (EIA)² — the Pennsylvania impact fee brings in less revenue than a severance tax comparable to that of

A Note About this Paper

This briefing paper compares the revenue generated by natural gas taxes or fees in effect in Pennsylvania, Texas, and West Virginia on a common gas production projection. It also calculates the effective tax rates paid on natural gas produced in these states. The effective tax rate — the average rate paid on the value of the resource — differs from the statutory, or posted, rate by taking into account exemptions and deductions. This briefing paper also estimates what shale gas wells in Texas pay with a costly — and unnecessary — rate discount that state allows.

The Effective Rates of Natural Gas Severance Taxes in Texas and West Virginia Clearly Outperform Pennsylvania's Impact Fee



Sources: Pennsylvania Budget and Policy Center calculations using data published by the U.S. Energy Information Administration, Texas Controller of Public Accounts, Texas Legislative Budget Board, Central Appalachia Regional Network, and the Federal Reserve Bank of St. Louis.
* Retroactive impact fee for 2011 due Sept. 2012
** Impact fee for 2012 due Apr. 2013

¹ Pennsylvania Budget and Policy Center, “Marcellus Impact Fee Comes Up Short,” June 18, 2013, <http://pennbpc.org/pa-marcellus-impact-fee-comes-short>.

² U.S. Energy Information Administration, *Annual Energy Outlook 2013*, Table 13 Natural Gas Supply, Disposition, and Prices, April 2013, http://www.eia.gov/forecasts/aeo/excel/aeotab_13.xlsx.

Texas or West Virginia. As production increases over time, the gap grows larger between the revenue generated at the West Virginia or Texas tax rates and from Pennsylvania’s impact fee.

The effective rates of the Texas and West Virginia severance taxes were calculated using the value of all natural gas produced in those states and the total natural gas taxes that were collected. The Texas shale gas tax rate is an estimate of what a typical shale gas well would pay in its first 10 years of operation, taking into account that state’s high-cost tax exemption.

If Pennsylvania adopted the effective rate of West Virginia’s severance tax — the middle rate of the three analyzed in this piece — the commonwealth could generate by 2019-20 nearly \$1 billion more per year than it is likely to generate with the current impact fee. Every year, Pennsylvania is leaving hundreds of millions of dollars on the table that would be collected in other, more conservative states that use those funds to help pay for schools, infrastructure, and health care.

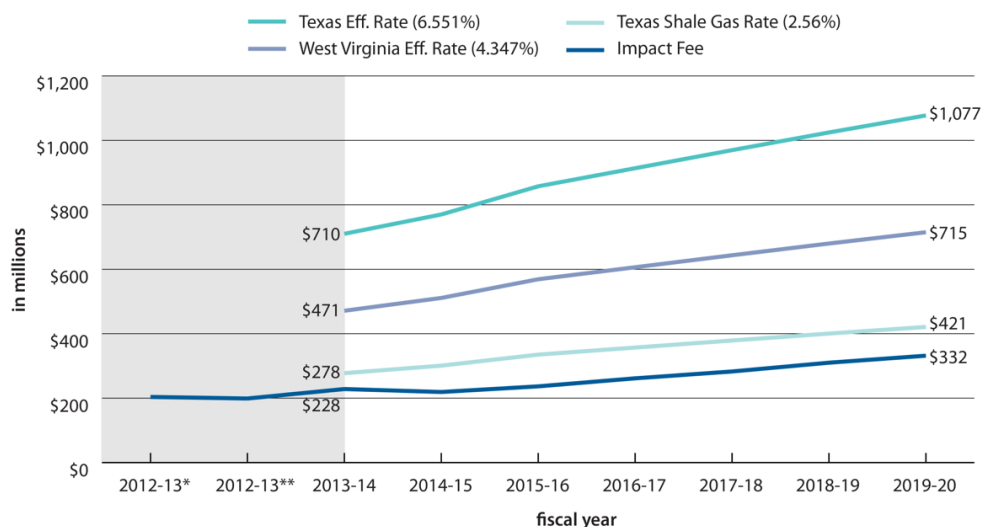
Estimated Revenue Gain From Replacing Pennsylvania Impact Fee With Texas or West Virginia-Type Severance Tax Rates			
(\$ millions)	Gain Using FY2012 Texas Rate	Gain Using West Virginia Rate	Gain Using Texas w/ Shale Incentives Rate
2013-14	\$573	\$303	\$85
2018-19	\$1,508	\$881	\$373
2023-24	\$2,409	\$1,442	\$657

Source. PBPC estimates using “moderate” production forecast

Even assuming lower levels of future drilling — 1,100 new wells per year — and low future natural gas prices — \$3 per thousand cubic feet (MCF) — impact fee revenue would grow more slowly than Texas- or West Virginia-type taxes on the same level of gas production.

It is important to note that drilling companies also pay local taxes, including property taxes on the production value of gas, in West Virginia,

Even with Fewer Wells and Low Gas Prices, Pennsylvania's Impact Fee Generates Less Revenue Than Texas' or West Virginia's Severance Tax Rate



Sources. Pennsylvania Budget and Policy Center calculations using data published by the U.S. Energy Information Administration, Texas Controller of Public Accounts, Texas Legislative Budget Board, Central Appalachia Regional Network, and the Federal Reserve Bank of St. Louis.
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Texas, and many other mineral-rich states. A 2002 state court decision³ exempted oil and gas reserves from local property taxes in Pennsylvania, leaving municipalities and school districts with little ability to recover the cost of drilling-related impacts.⁴

Texas

Texas has been the U.S. leader in natural gas production for many years⁵ and has long levied a 7.5% “production tax” on natural gas extraction. In the mid-1990s, as its traditional reserves diminished, Texas created tax incentives to encourage drillers to tap into deeper and harder-to-reach deposits — eventually including shale wells, which were not developed until later. The incentives cut the production tax rate of “high-cost” wells for the first 10 years of operation based on how expensive the well was to drill. A Texas legislative report illustrated how a shale well with area-typical drilling costs could pay a 2.56% production tax rate during its first 10 years of operation — a cut of approximately two-thirds to the statutory rate.⁶ As shale drilling is becoming the norm in the natural gas industry, lawmakers in Texas have been considering eliminating this costly tax incentive.⁷

Texas still has a large share of its production coming from regular gas wells, which pay the full 7.5% production tax rate. Comparing the production taxes paid by all Texas gas wells in Fiscal Year 2012 to the market value of the production based on Henry Hub prices for the same period, we calculate the effective Texas production rate to be 6.551%.⁸

In addition to the production tax, Texas levies state regulatory fees and taxes and local property taxes on the value of all gas production. These other Texas taxes add an additional 2.92% on top of whatever production tax is paid. This means the well paying 2.56% in production tax pays a total tax bill on its production of 5.48%.⁹

³ Sean Hamill, “2002 court case proved windfall for shale drillers,” *Pittsburgh Post-Gazette*, September 29, 2010 <http://www.post-gazette.com/stories/local/region/2002-court-case-proved-windfall-for-shale-drillers-266017/>.

⁴ The impact fee was designed to address some of these issues by providing host counties and municipalities with a share of the impact fee revenue. School districts do not receive impact fee funds.

⁵ See “Natural Gas Gross Withdrawals and Production,” U.S. Energy Information Administration (EIA), http://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FGW_mmcf_a.htm.

⁶ Texas Legislative Budget Board, *Overview of Natural Gas Tax Structures*, 2011 http://www.lbb.state.tx.us/Other_Pubs/Natural%20Gas%20Tax%20Overview.pdf.

⁷ Dave Fehling, “Texas Drillers Get Big Tax Breaks,” *StateImpact Texas: Energy and Environment Report (NPR)*, January 9, 2012, <http://stateimpact.npr.org/texas/2012/01/09/texas-drillers-get-big-tax-breaks/>.

⁸ Our calculations compare natural gas production tax collections from FY 2012 as reported by the Texas Comptroller of Public Accounts (<http://www.window.state.tx.us/taxbud/revenue.html>) to total Texas natural gas production reported by the U.S. Energy Information Administration (EIA) (http://www.eia.gov/oil_gas/natural_gas/data_publications/eia914/bestestofgrosswd.xls), valued at Henry Hub prices for that period as reported by the St. Louis Federal Reserve (<http://research.stlouisfed.org/fred2/series/GASPRICE/downloaddata?cid=32217>).

⁹ Analysis of shale production rates by Headwaters Economics and the Oklahoma Policy Institute.

West Virginia

The severance tax rate in West Virginia is 5% of production value, plus an additional \$0.047 per thousand cubic feet of gas produced. Like most other states, West Virginia has special allowances and deductions from its tax that lower the effective rate of its tax. For 2011, we calculate the effective tax rate in West Virginia at 4.3% when comparing the actual tax collected to the economic value of gas produced.¹⁰

Conclusion

Both West Virginia and Texas get a better deal for their citizens from the development of a one-time and non-mobile resource than Pennsylvania does. If Pennsylvania were to replace its impact fee with a severance tax rate comparable to those in effect in either Texas or West Virginia, there would be a substantial revenue gain.

At a time when state tax revenue collections are stagnant and lawmakers are looking for additional revenue to prevent further cuts to education, health care, human services, and infrastructure, Pennsylvania should replace its current ineffective drilling impact fee with a reasonable natural gas severance tax.

The Pennsylvania Budget and Policy Center is a non-partisan policy research project that provides independent, credible analysis on state tax, budget and related policy matters, with attention to the impact of current or proposed policies on working families.

¹⁰ We compared 2011 West Virginia natural gas collections reported by the Central Appalachia Regional Network (http://carnnet.org/docs/CARN_SeveranceTaxReport.pdf) to 2011 production reported by the EIA (http://www.eia.gov/dnav/ng/ng_prod_whv_dcu_SWV_a.htm). Gas production valued at Henry Hub prices reported by the St. Louis Federal Reserve (<http://research.stlouisfed.org/fred2/series/GASPRICE/downloaddata?cid=32217>).