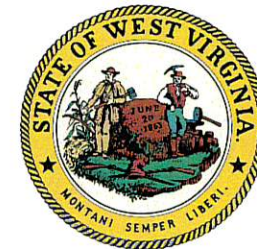


W E S T V I R G I N I A



DEPARTMENT OF REVENUE

Joint Interim Meeting Finance-Energy Severance Taxes

DEPUTY REVENUE SECRETARY MARK B. MUCHOW

West Virginia State Capitol

June 25, 2018

Secretary **Dave Hardy**

Governor **Jim Justice**

Background Information

Source: U.S. Census Bureau, *State Government Tax Collections*

- **Severance taxes** are incurred when [non-renewable natural resources](#) are extracted (or severed) within a taxing jurisdiction. (Wikipedia Definition)
- Severance Taxes Imposed in 35 States
 - Oil, Natural Gas and Coal the three top minerals subject to tax
 - \$8.5 Billion in collections in FY2017 (0.9% of total State Tax collections)
 - Average annual decline of 2.6% versus 2.2% growth for all tax collections [2007-2017]
 - More prevalent in small states, less prevalent in larger states
 - No Severance Tax imposed in New York, Pennsylvania, Illinois
 - Pennsylvania: Drilling Impact Fee - \$200 million + per year yield [Collected by PPUC]
- Texas, Alaska and North Dakota account for two-thirds of total tax receipts
 - Per Capita Collections: \$2,010 in North Dakota, \$945 in Alaska & \$890 in Wyoming
 - Per Capita Collections: \$225 in West Virginia, \$112 in Texas, \$29 in Kentucky
- Tax Collection Patterns Highly Volatile & Uncertain

Origin of the State Severance Tax

Gross Sales Tax Law - 1921

- The “fairest tax” replaced a tax on corporate profits & an unconstitutional gas pipeline tax as of July 1, 1921
- Base of tax was business gross receipts > \$10,000
- Tax Rate on Mining: 0.40% of gross receipts

Origin of the State Severance Tax

Business & Occupation Tax – 1971-75 Changes

- New Rates Imposed in 1971
 - Coal: 3.50% of gross receipts
 - Oil: 4.34%
 - Natural Gas: 8.63%
 - Limestone, Sandstone: 2.20%
 - Sand Gravel: 4.34%
 - Timber: 2.20%
 - Other: 2.86%

1975 – 0.35% Local Coal Added to 3.50% State Tax

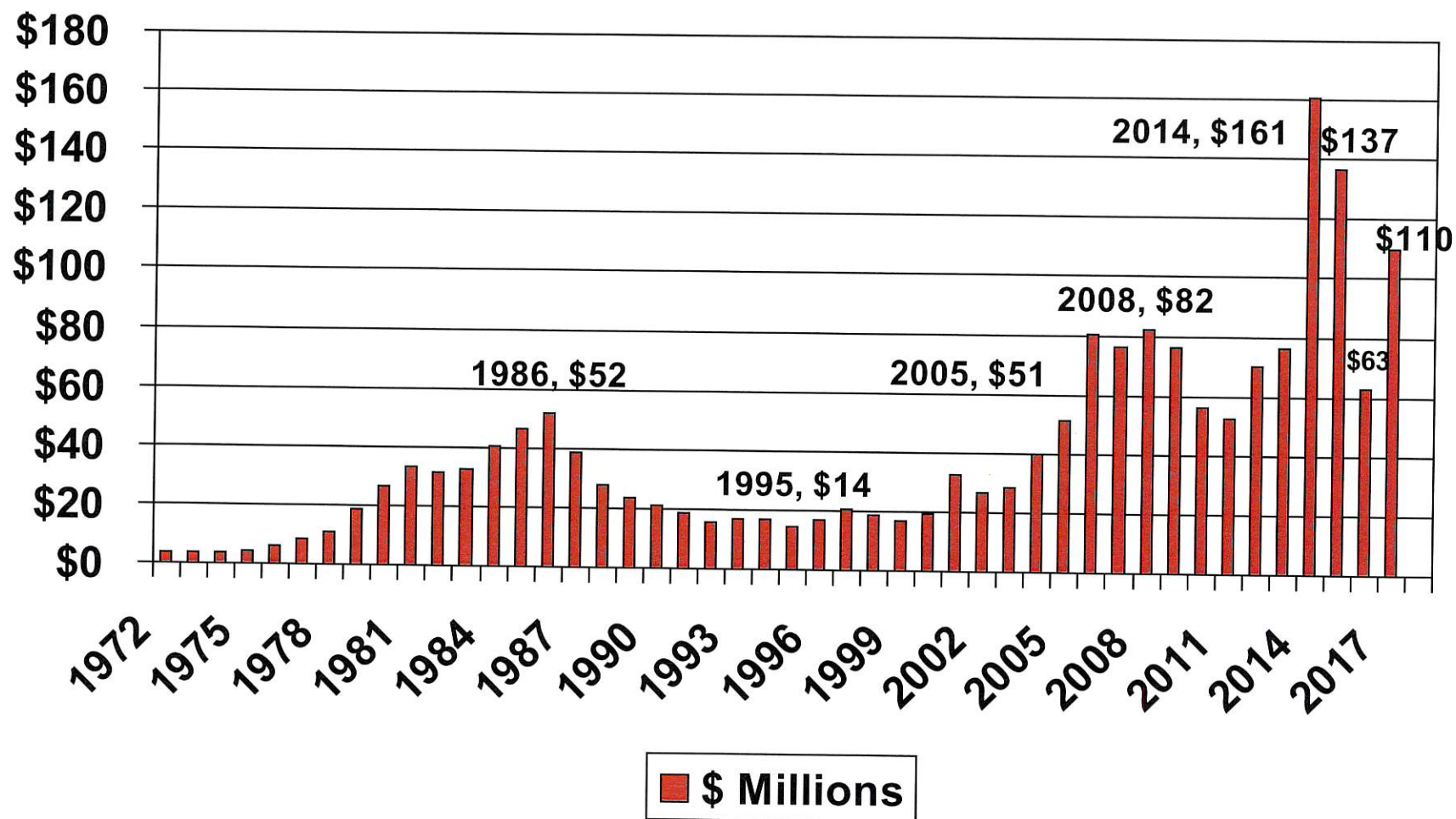
Current Tax Rates – Natural Gas & Oil

1. 5.00% State Tax on value at the well-head

- Gross Receipt Exclusions
 - Free natural gas provided to surface owner
 - Low Volume well exclusion for Less Than 5,000 cubic feet per day (NG)
 - » Less than 1.3% of production
 - Low-Volume well exclusion for Less Than One-Half Barrel of Oil per day
 - » Less than 6% of production
 - 10-Year exclusion for vertical wells shut-in for period of 5 or more years
- Other Tax Preferences
 - Manufacturing Investment Tax Credit– Gas Processing Facilities
 - \$500 annual credit: < \$2 million/year

2. 5.00% Local Tax on Coal-Bed Methane at the well-head

WV Natural Gas Severance Tax Collections by Fiscal Year 1972-2017



Natural Gas Transportation Allowance. --

Value is determined at the well head. Where natural gas is transported to a place distant from the well head for use, consumption or further processing, the cost of transporting the natural gas is not included in the value of product taxed.

Actual Transportation Costs Deduction -- must be supported by schedules and statements of cost by the producer and will be subject to review and audit, and possible assessment or refund as a result of such audit, by the Tax Department.

FERC Alternative -- producers who are subject to regulation by the Federal Energy Regulatory Commission (FERC) under the Natural Gas Act of 1978 may use the first sale ceiling price as determined by FERC §2(21) of the Natural Gas Policy Act report as the value of their gas production the regulation as an amount equal to the Purchased Gas Adjustment (PGA) filed bi-annually with FERC plus any reimbursement of personal property taxes and business and occupation taxes or other severance taxes made by purchasers on sale of affected gas if included in the PGA costs.

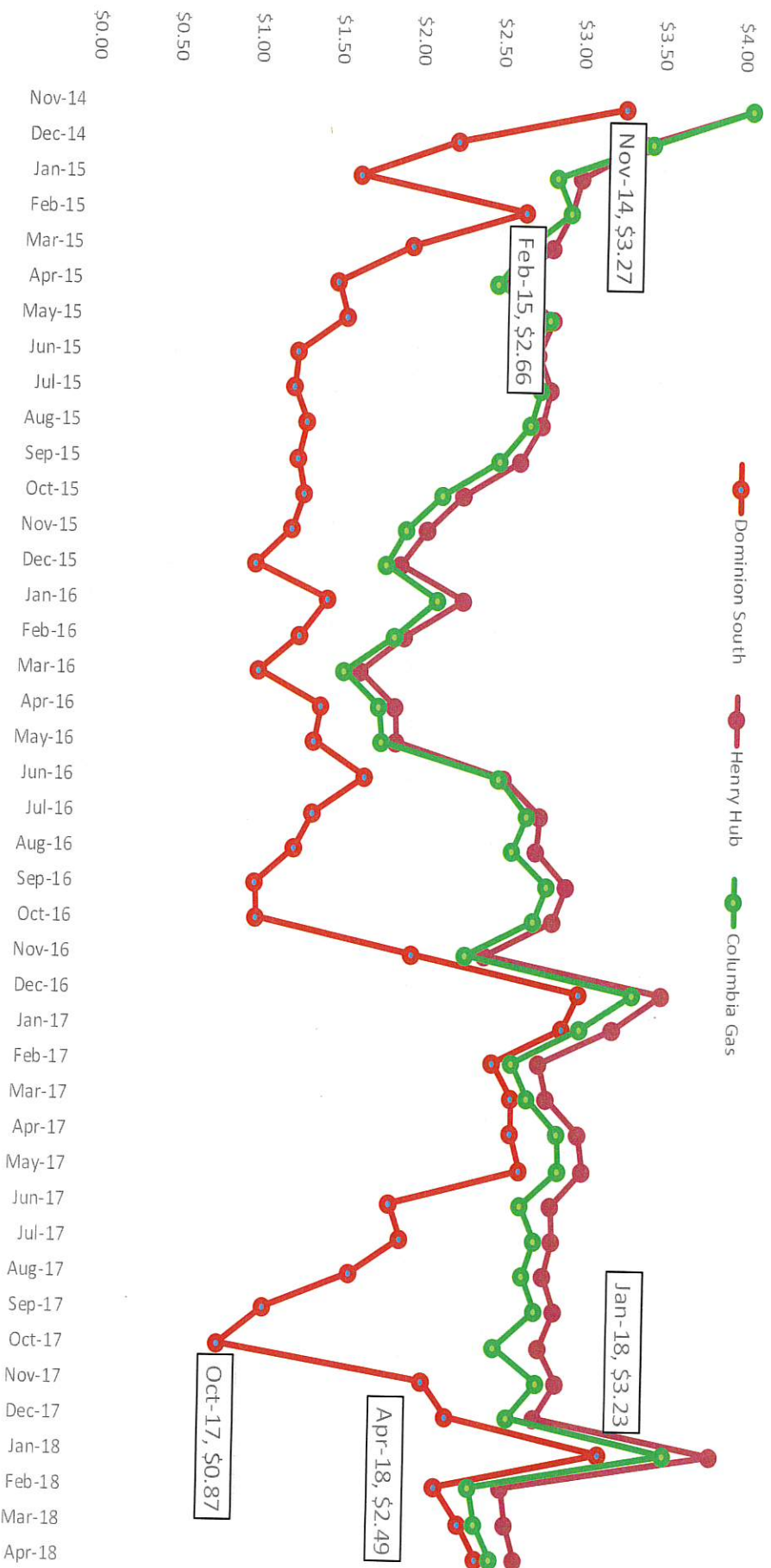
Average Pool Price --alternative -- Well-mouth value of production may be determined by the average purchase price of natural gas from the same pool or field, or, in the event no gas is purchased from the same pool or field, by average purchase price of natural gas from the most proximate pool or field, of gas with the same quality and characteristics.

15% Safe Harbor -- Value of gas not sold at the well-mouth may be determined by a deduction of transportation and transmission costs in the amount of 15% of the gross proceeds

Average Monthly Natural Gas Prices

Source: Natural Gas Intelligence

Monthly Natural Gas Prices From November 2014 Through April 2018



Dry Natural Gas Severance Tax Base

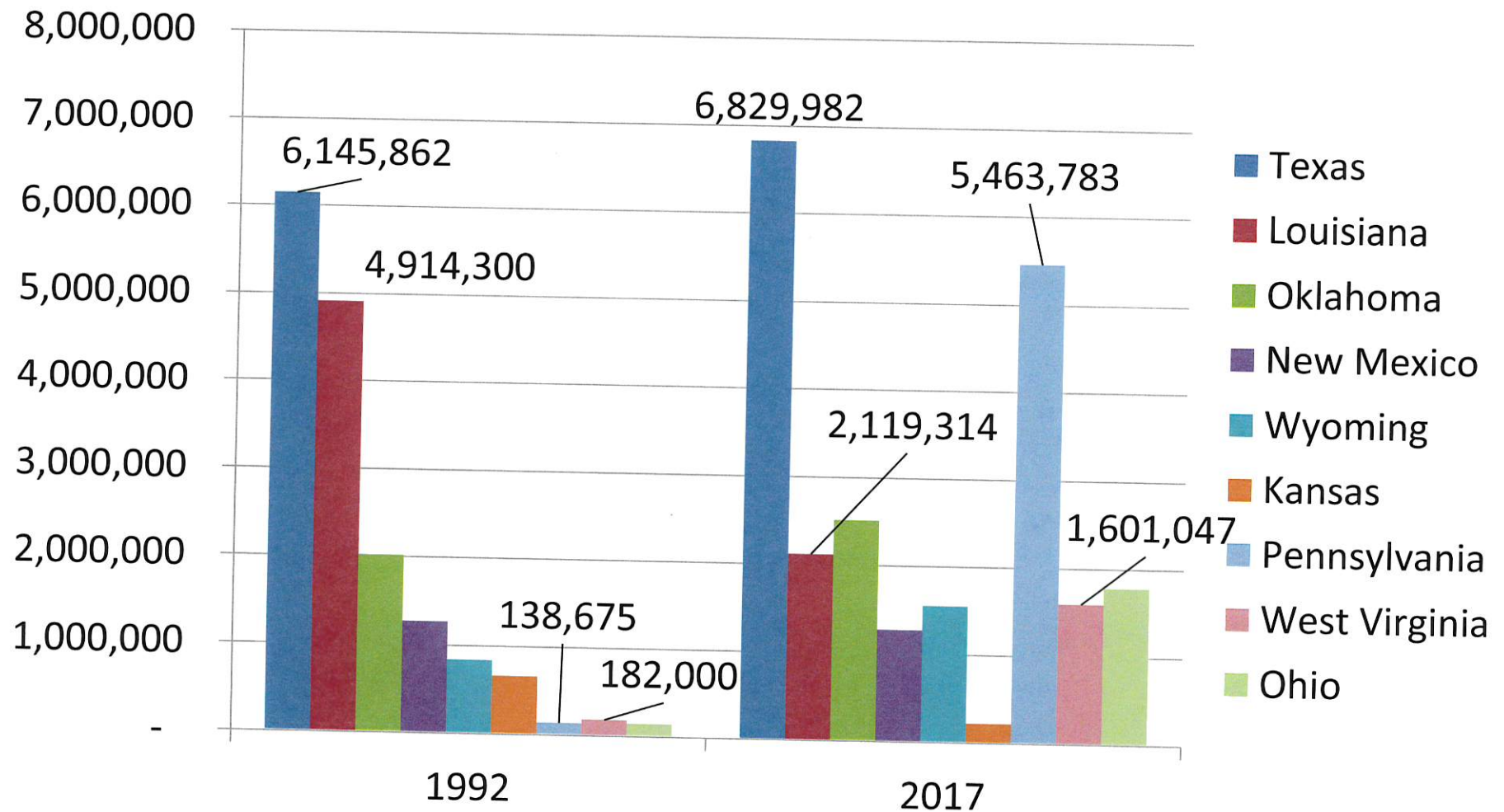
- Volume (1,000 cubic feet)
 - Louisiana - wellhead
 - North Dakota - wellhead
 - Ohio - wellhead (300 pounds per square inch)
- Receipts
 - Nevada: Net Proceeds: Gross receipts less production costs
 - Oklahoma & Kentucky: Gross Receipts at first sale
 - Texas: Gross Receipts at wellhead
 - Wyoming: Fair market value less processing & transportation deductions at outlet of initial dehydrator
 - West Virginia: Gross Receipts at wellhead

Comparative Natural Gas Tax Yields

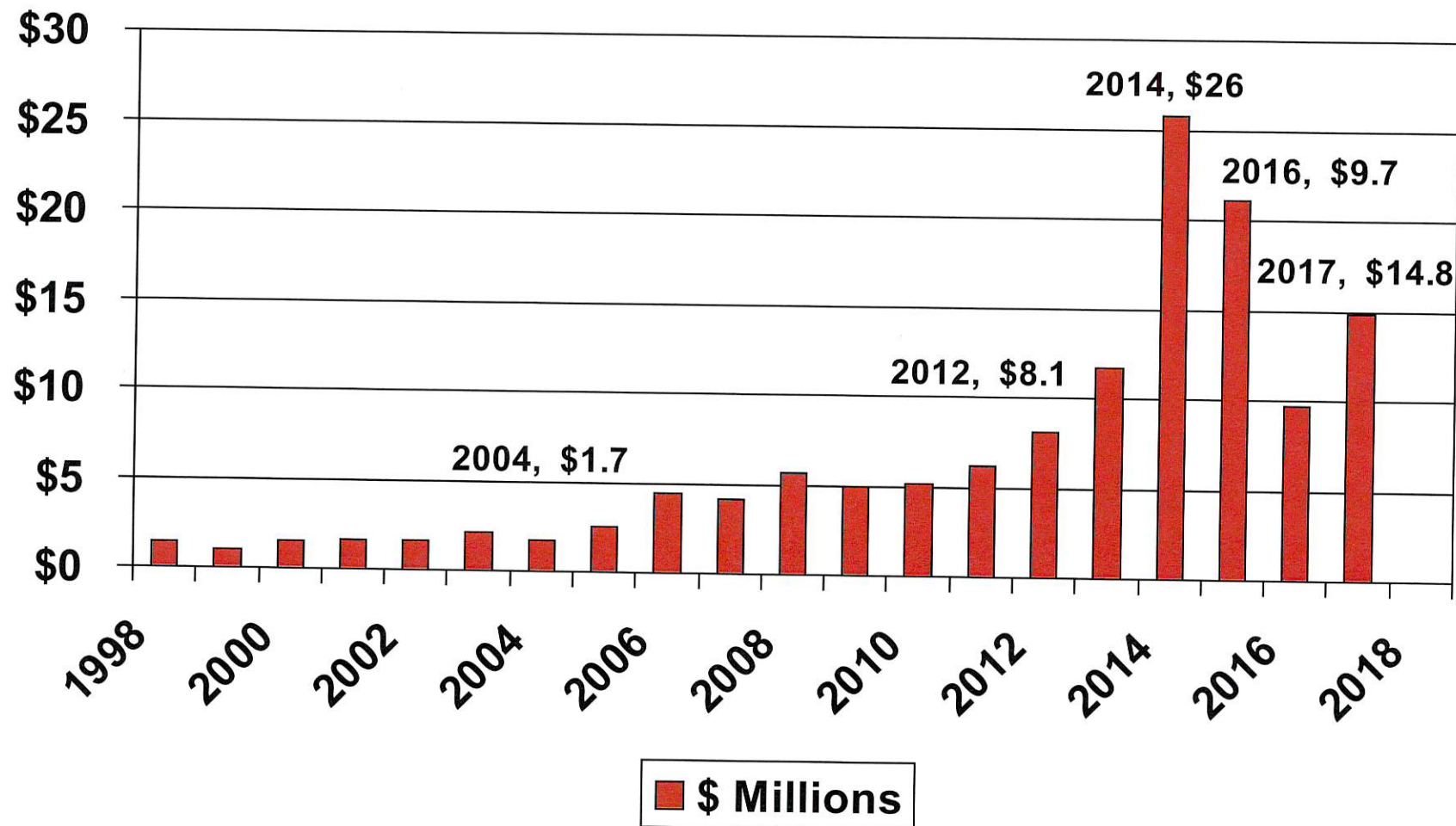
State	Tax Rate	Revenue	Est Yield Per Mcf
West Virginia	5.0% Gross Receipts	\$109 million	8.2 cents
Kentucky	4.5% Gross Receipts	\$7 million	7.5 cents
Ohio	2.5 cents per Mcf	31 million	2.5 cents
Pennsylvania	Drilling Fee	\$219 million	4.0 cents
Louisiana*	11.1 cents per Mcf	\$101 million	11.1 cents
Oklahoma	1-7% Gross Receipts	\$205 million	8.1 cents
North Dakota*	7.05 cents per Mcf	\$33 million	6.0 cents
Texas	7.5% Gross Receipts	\$1 billion	16.0 cents
Wyoming	6.0% Gross Receipts	\$145 million	8.7 cents

Natural Gas Production: 1992 vs 2017

Source: U.S. Department of Energy, Energy Information Administration



WV Oil Severance Tax Collections by Fiscal Year 1998-2017

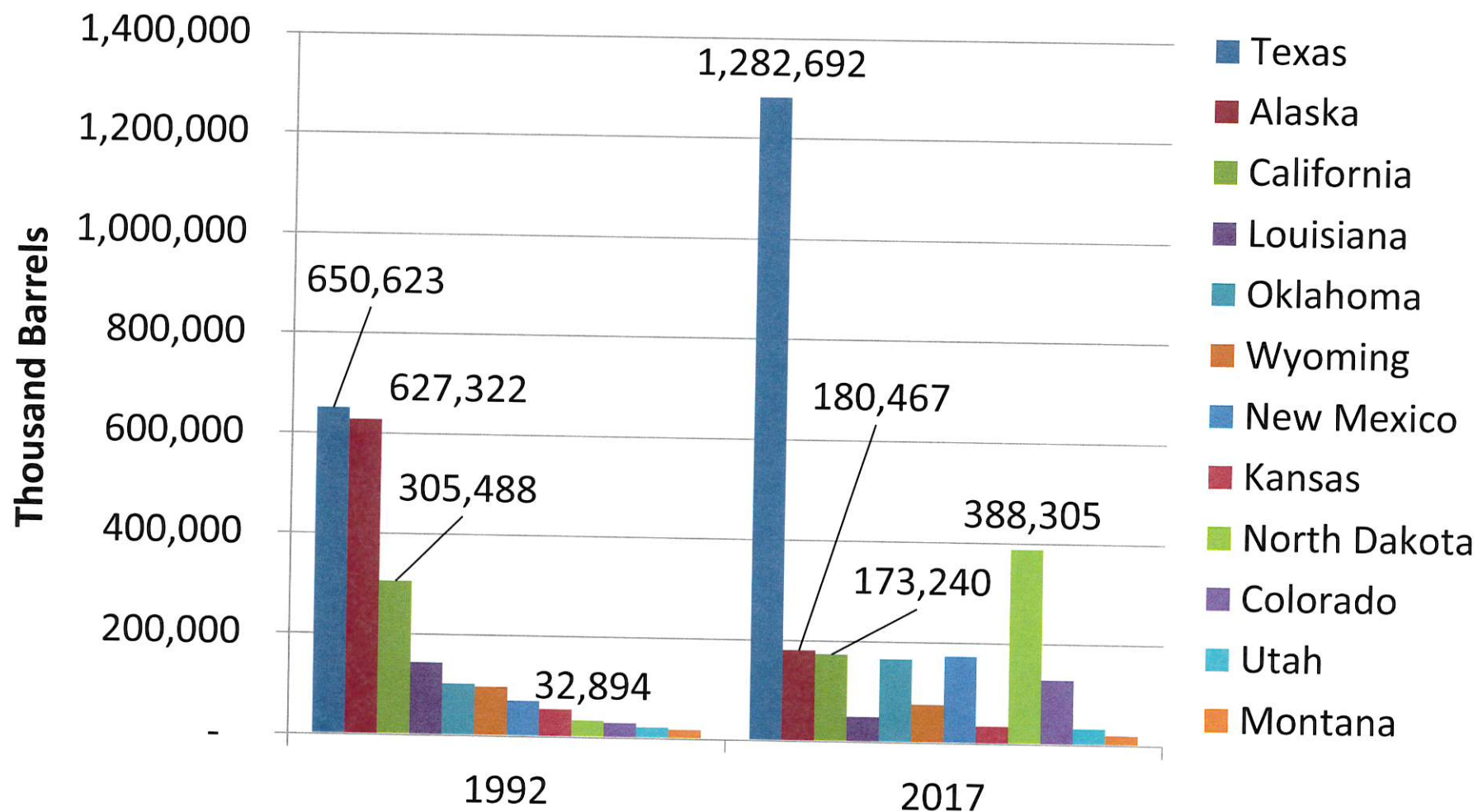


Comparative Oil Tax Yields

State	Tax Rate	Revenue	Est Yield Per Barrel
West Virginia	5.0% Gross Receipts	\$15 million	\$2.00
Kentucky	4.5% Gross Receipts	\$5 million	\$1.90
Ohio	10.0 cents/barrel	31 million	\$0.10
Pennsylvania	No Tax	\$0 million	N/A
Alaska	35% Net Tax Value	\$300 million	\$1.00
California	\$0.5038349/barrel	\$87 million	\$0.50
North Dakota	10.0% Gross Receipts	\$1.4 billion	\$3.60
Texas	4.6% Gross Receipts	\$2.0 billion	\$1.95
Wyoming	6.0% Gross Receipts	\$148 million	\$2.04

Oil Production: 1992 vs 2017

Source: U.S. Department of Energy, Energy Information Administration



WV- Small Player in Oil Production

Source: U.S. Energy Information Administration

- Severance Tax yield greatest in major oil producing states
- WV: < 9.5 million barrels in 2017
 - TX: 135 times greater at nearly 1.3 billion
 - ND: 41 times greater
 - AK: 19 times greater
 - NM: 18 times greater
 - WY: 8 times greater

WV-Current Tax Rates – Coal

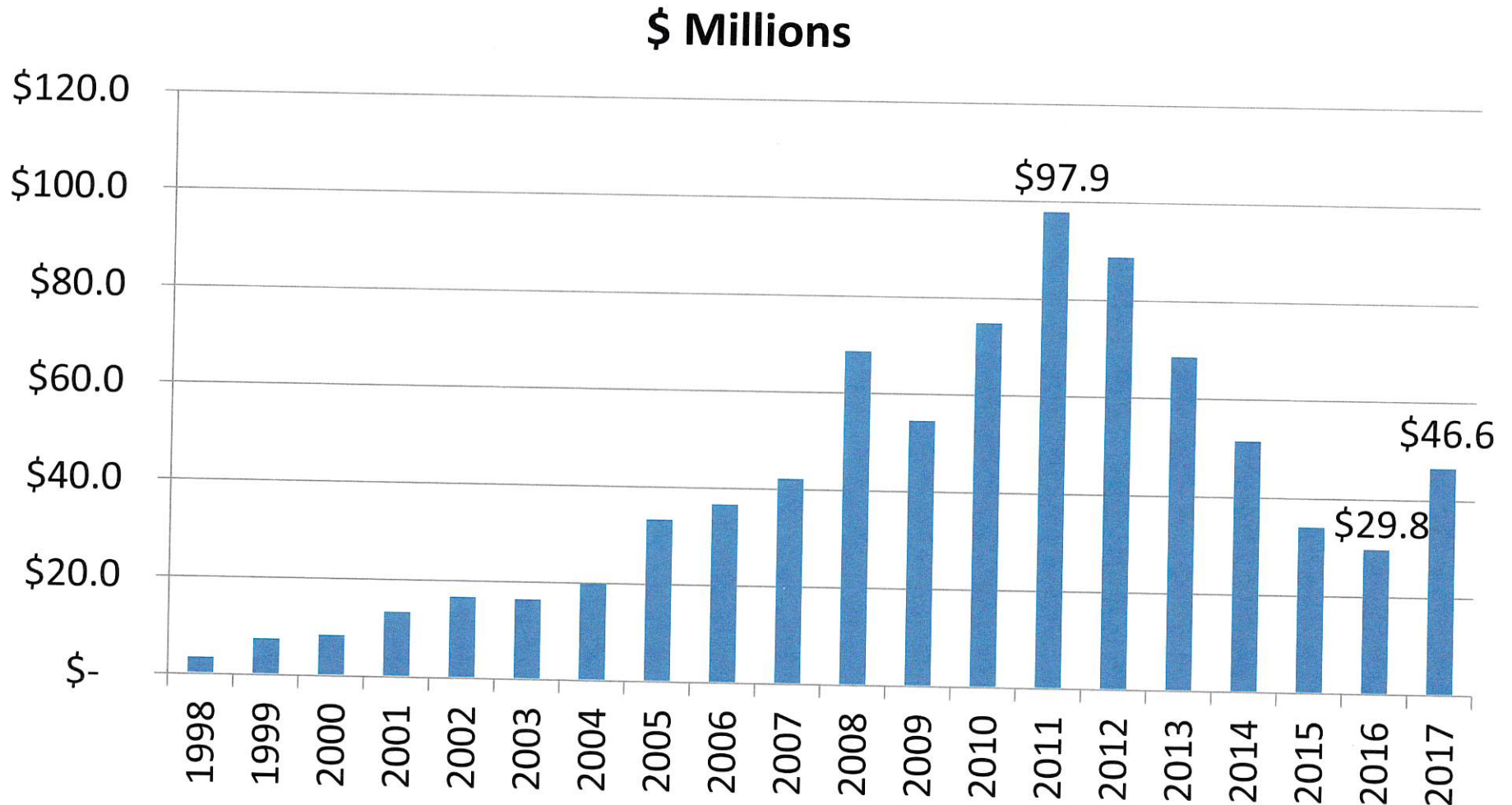
75 Cent Minimum Tax Does Not Apply Unless Coal Price is < \$16.13 Per Ton

1. 4.65% State Tax plus 0.35% local tax
 - Thin Seam-State rate – No reduction in local tax rate
 - 1.65% rate if underground seam between 37” and 45”
 - 0.65% rate if underground seam less than 37”
 - Waste Coal : 2.5% local tax in lieu of 5.0% tax
2. Coal Reclamation Fee: \$0.279/clean ton mined
3. DEP Administrative Fee: \$0.02/clean ton sold
4. Coal Resource Transportation Fee: \$0.05/ton
 - Payable by shippers of coal under special permit
 - Privilege of hauling more than 88,000 pounds on coal roads

Coal Severance Tax Preferences

- Thin-Seam Underground Tax Rates
 - Estimated 10-20 million tons/year
 - 1.65% rate: 70% of tonnage (\$28.6 million in TY2017)
 - 0.65% rate: 30% of tonnage (\$18.0 million in TY2017)
- Coal-Loading Facility Tax Credit:
 - 10% investment tax credit [transfer to rail or barge]
 - 1.1 million/year
- \$500 Annual Credit: < \$30,000

Value of Thin-Seam Tax Rate Preference Tied to Metallurgical Coal Market

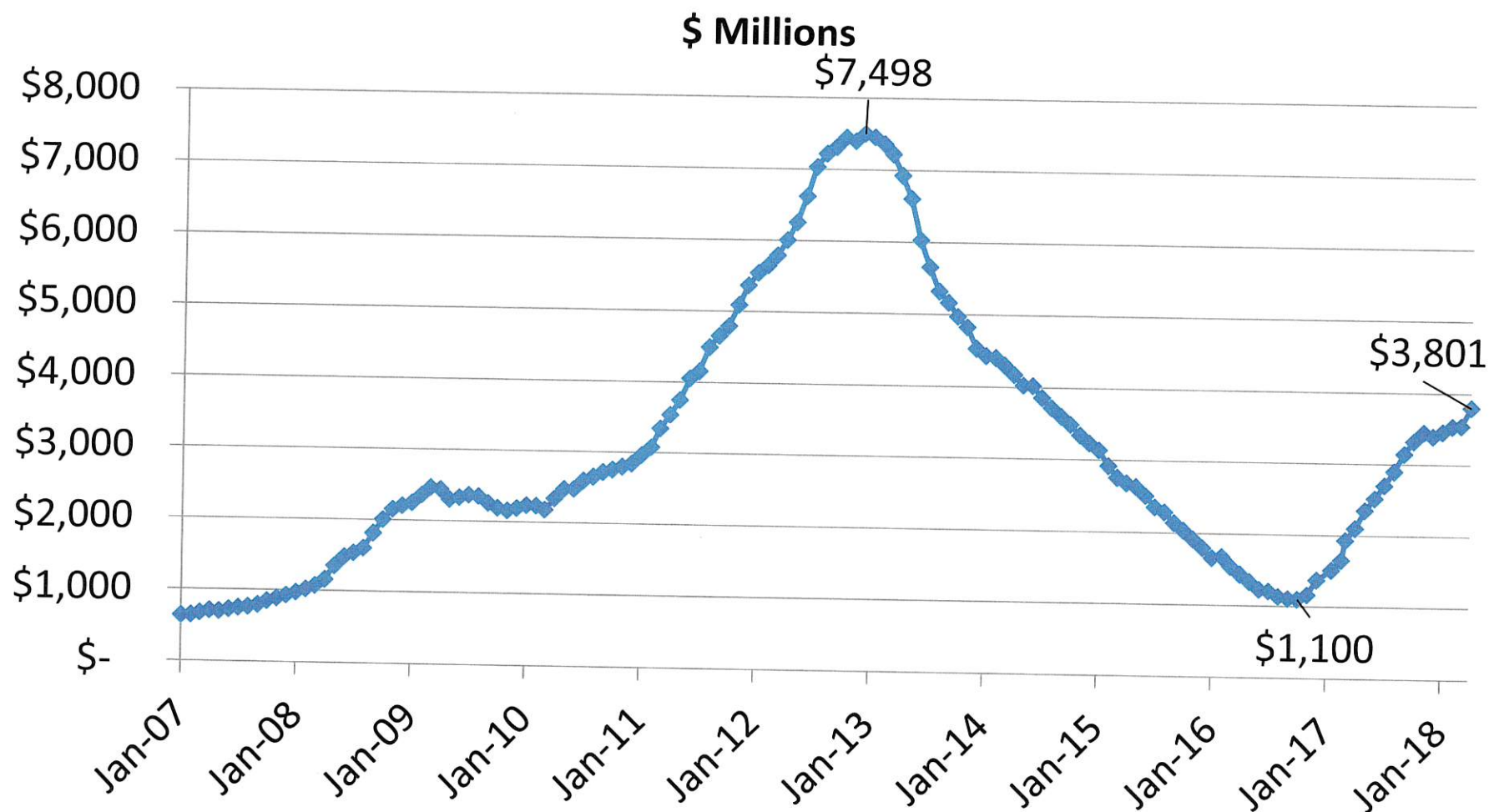


West Virginia Non-Manufacturing Good Exports

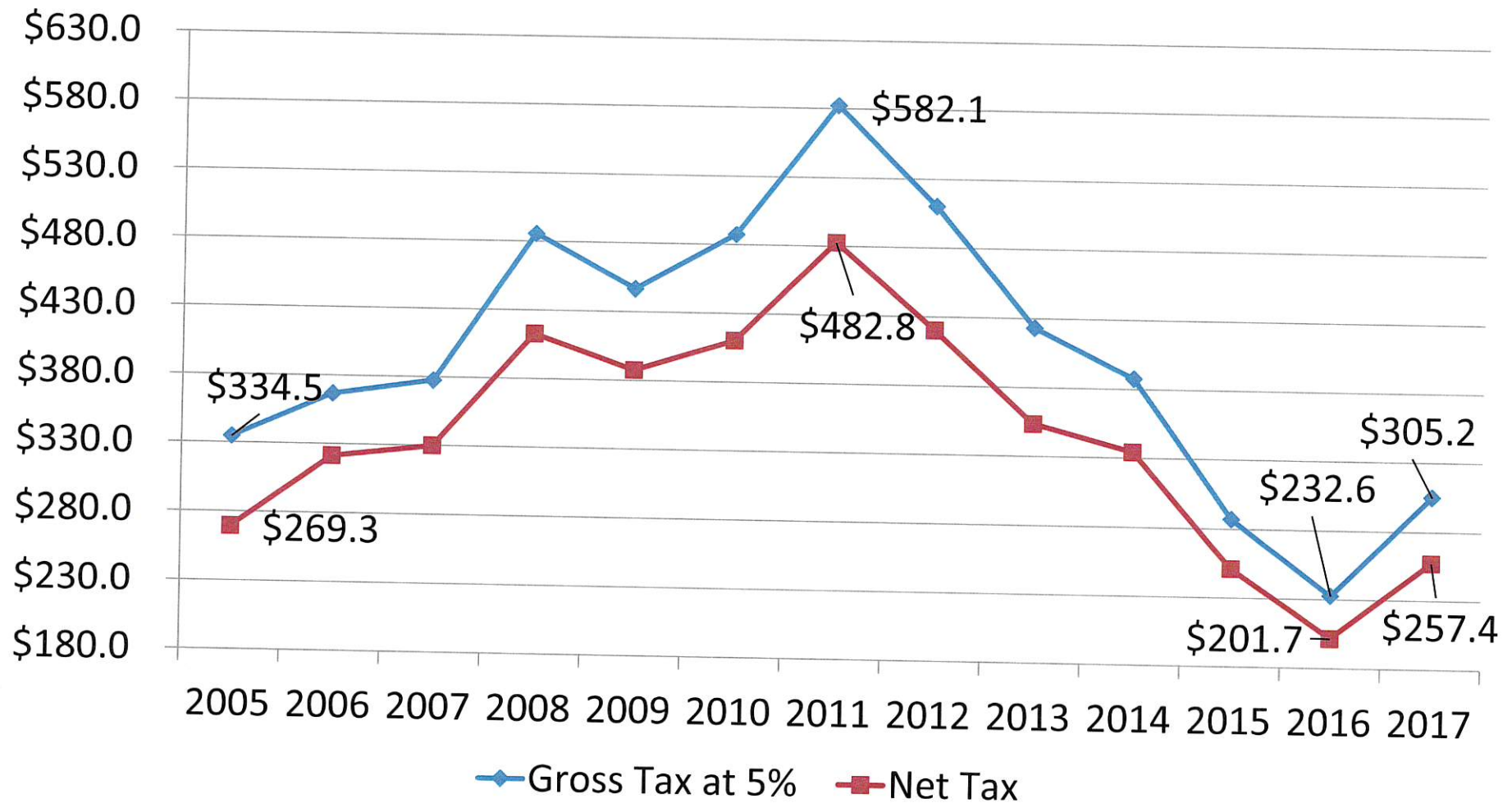
Down 49% Since 2012; Up 245% Since October 2016

Trailing 12 Month Trend: April 2018

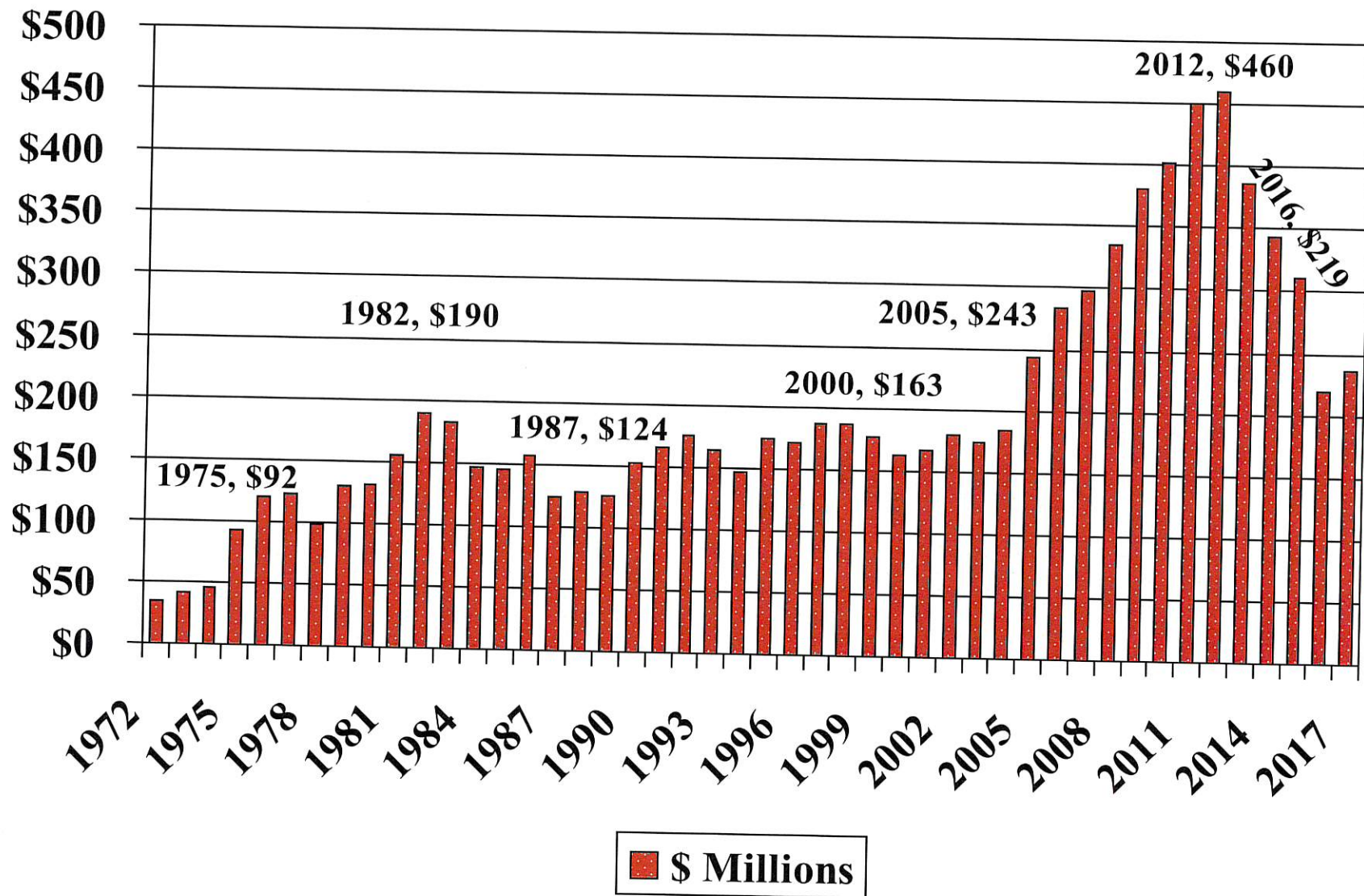
Source: U.S. Census Bureau



Coal Severance Tax Revenue Trends by Tax Year-Annual Return Data



State and Local Coal Severance Tax Revenue Trends: 1972-2017

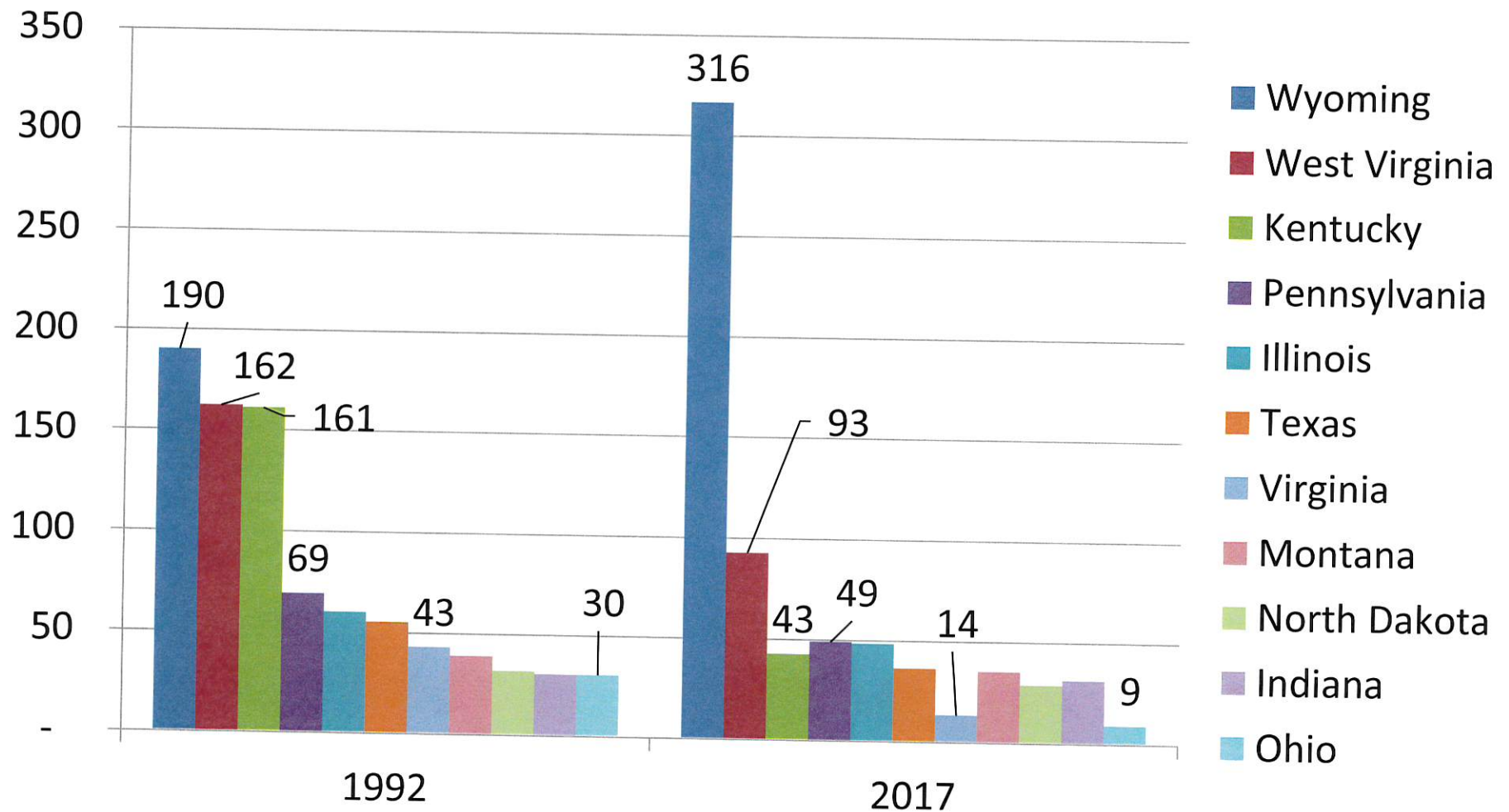


Comparative Coal Tax Yields

State	Tax Rate	Revenue	Est Yield Per Ton
West Virginia	5.0% Gross Receipts	\$257 million	\$2.75
Kentucky	4.5% Gross Receipts	\$121 million	\$2.35
Ohio	25.2 cents/ton	3 million	\$0.252
Pennsylvania	No Tax	\$0 million	N/A
Virginia	2.0% Gross Receipts	Local Tax	\$1.20
Illinois	No Tax	\$0 million	N/A
Montana (3%-15%)	10% Gross Receipts	\$60 million	\$1.70
Texas	No Tax	\$0 million	N/A
Wyoming (3.5-7%)	7.0% Gross Receipts	\$203 million	\$0.69

Coal Production: 1992 vs 2017

Source: U.S. Department of Energy, Energy Information Administration



Annual Coal Production by State: 2018 v 2017

Total U.S. Production Down 2.2%

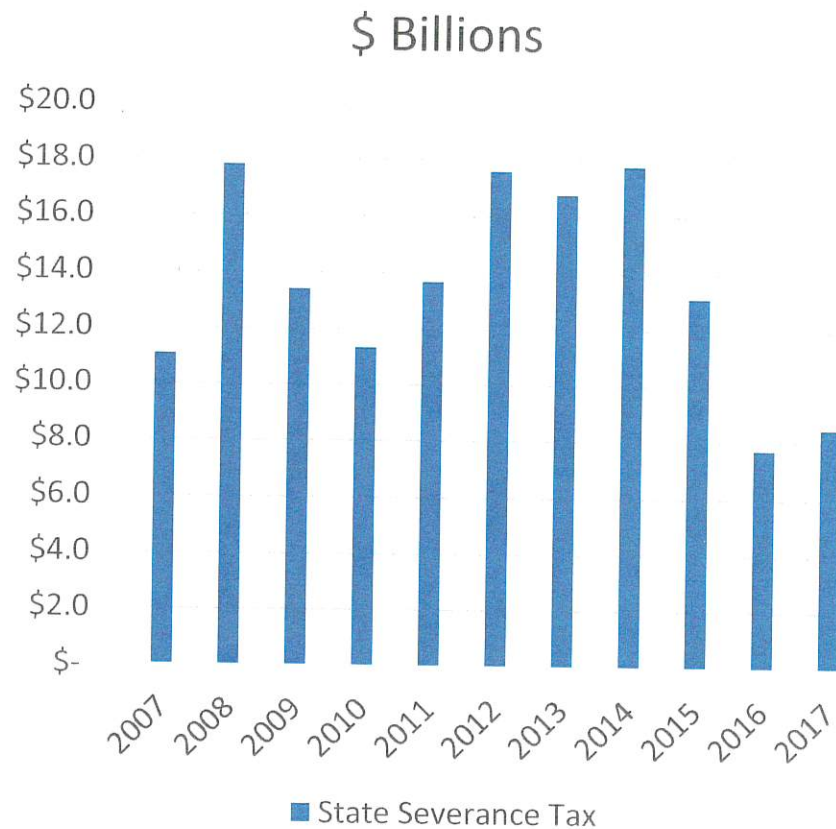
Source: U.S. Energy Information Administration, *Weekly Coal Production*

State	YE 6/2/2018	YE 6/3/2017	% Change
Wyoming	314,895	325,514	- 3.3%
West Virginia	92,779	88,859	+ 4.4%
Pennsylvania	48,398	50,004	- 3.2%
Illinois	47,745	47,105	+ 1.4%
Kentucky	41,214	44,656	- 7.7%
Montana	36,254	33,744	+ 7.4%
Texas	34,991	38,271	- 8.6%
Indiana	30,828	30,956	- 0.4%
North Dakota	28,235	28,762	- 1.8%
Colorado	15,359	15,039	+ 2.1%
Utah	13,889	14,230	- 2.4%
Virginia	13,212	14,232	- 7.2%

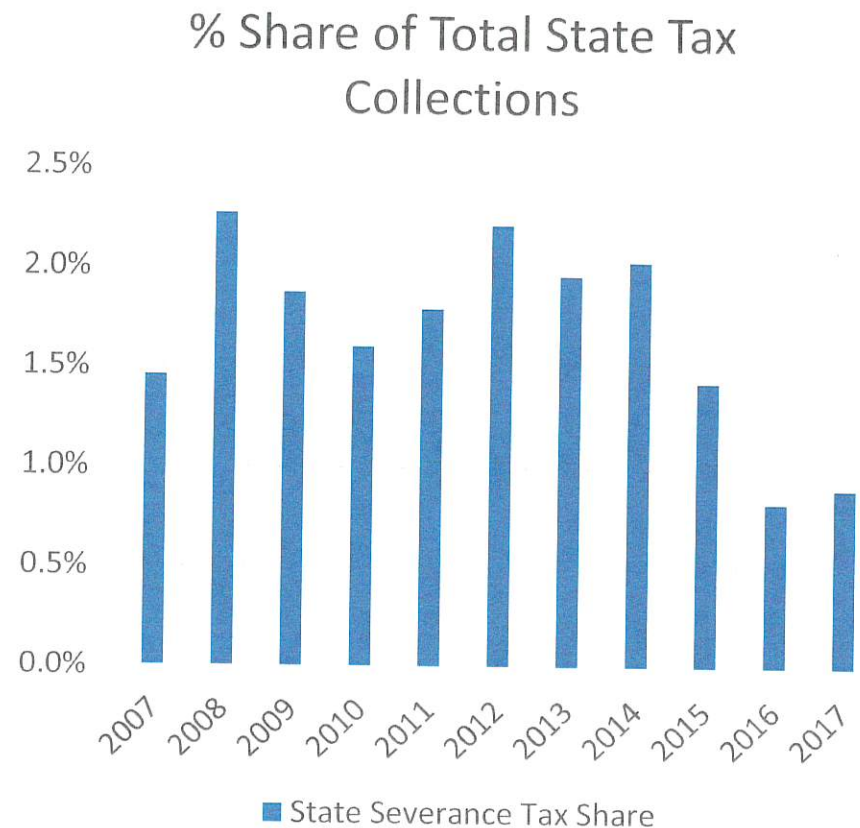
Volatile Severance Tax Collections: 2007-2017

Source: U.S. Census Bureau: State Government Tax Collections

Severance Tax Collections-All States Fiscal Year 2007- Fiscal Year 2017



Severance Tax Share Falling To Less Than 1% of Total Taxes

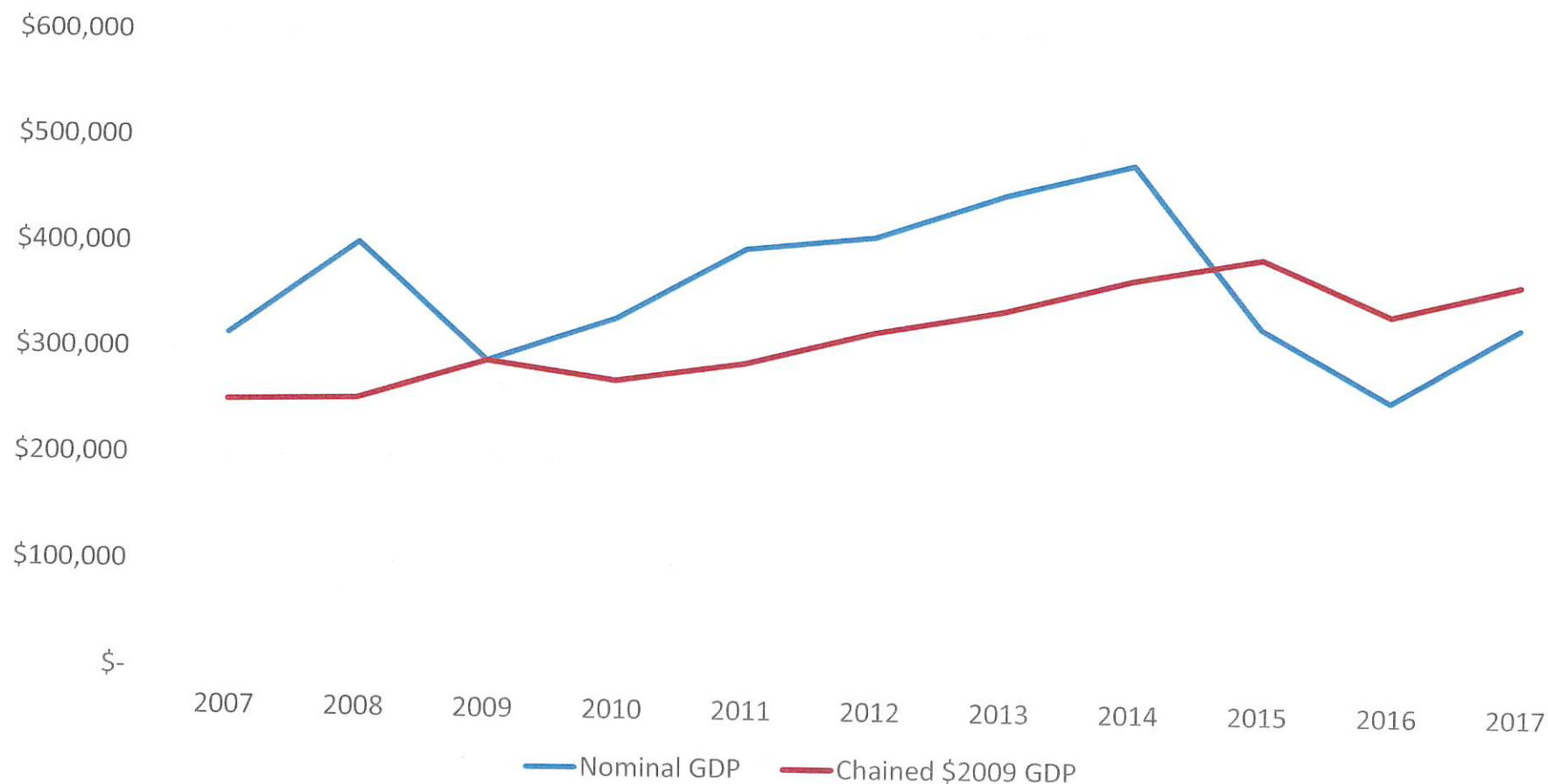


U.S. Mining GDP: 2007-2017

Average Annual Real GDP Growth of 4.0% vs. Nominal GDP Growth of 0.5%/Year

Source: U.S. Department of Commerce Bureau of Economic Analysis

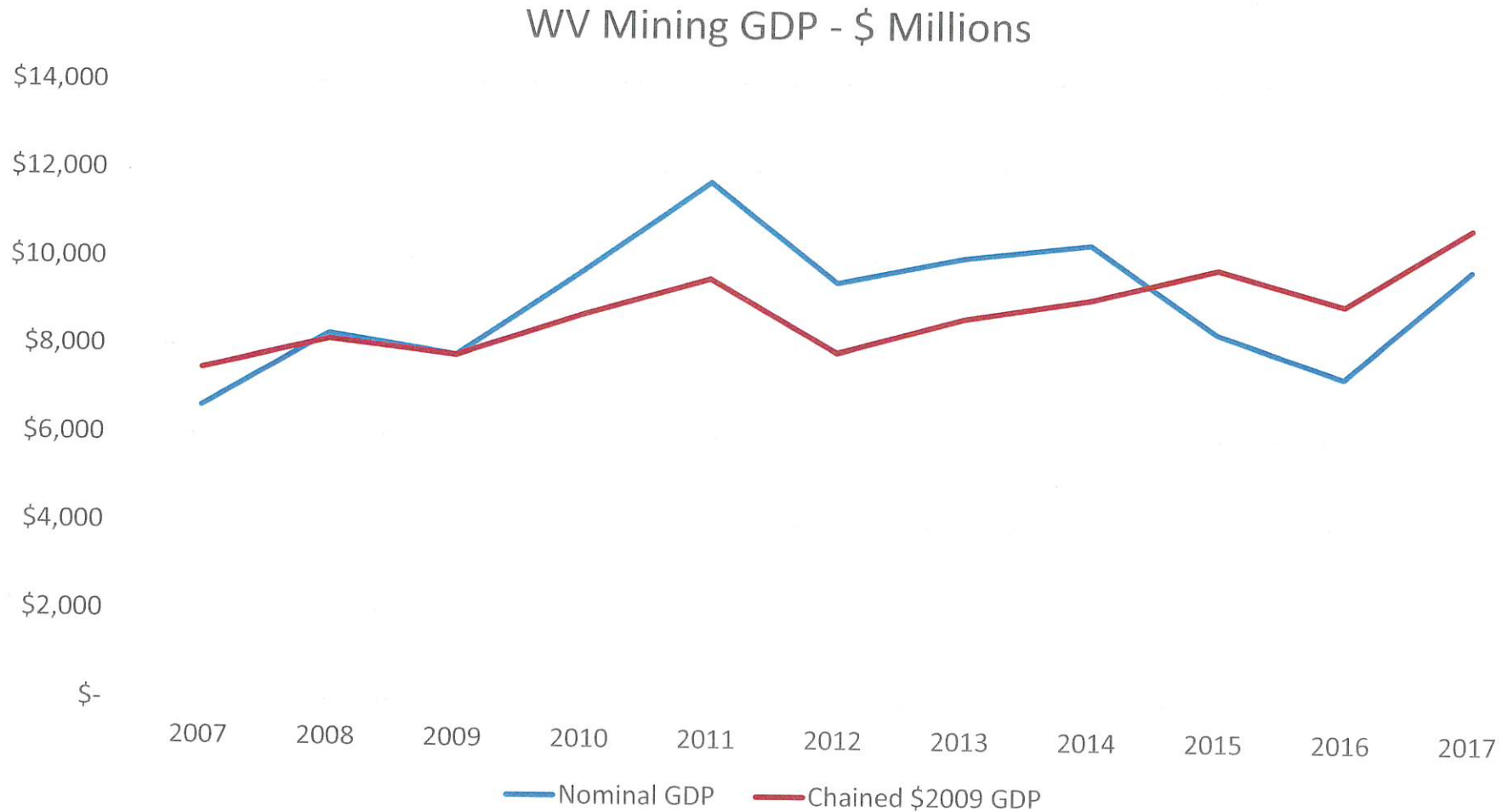
U.S. Mining GDP - \$ Millions



WV Mining GDP: 2007-2017

Average Annual Real GDP Growth of 3.8% vs. Nominal GDP Growth of 4.1%/Year

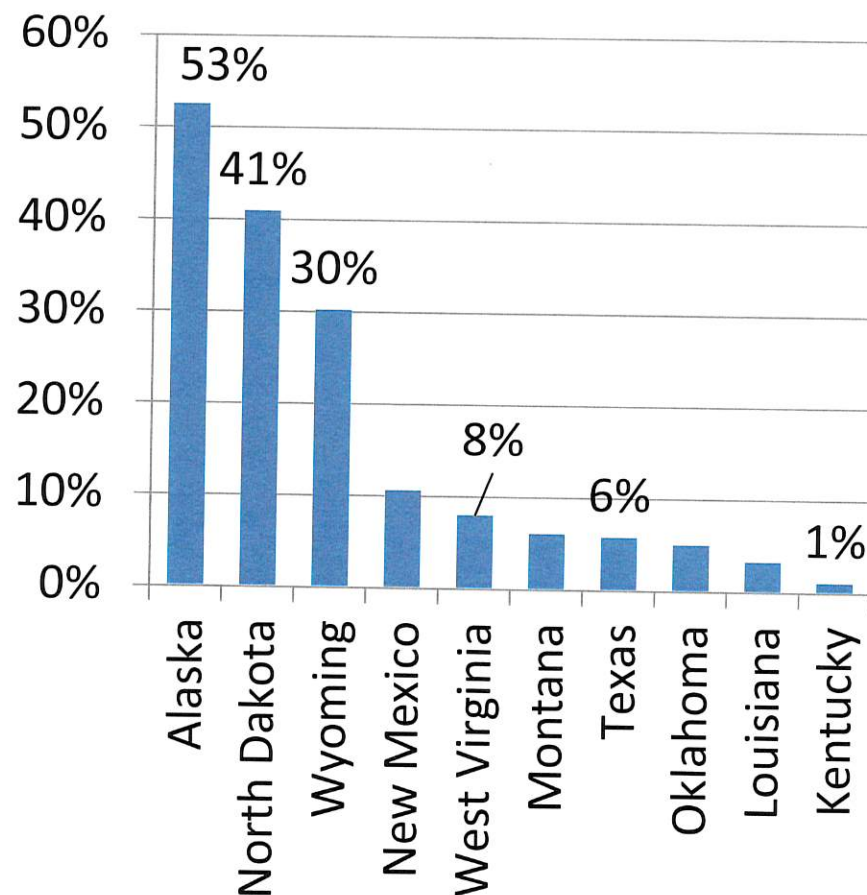
Source: U.S. Department of Commerce Bureau of Economic Analysis



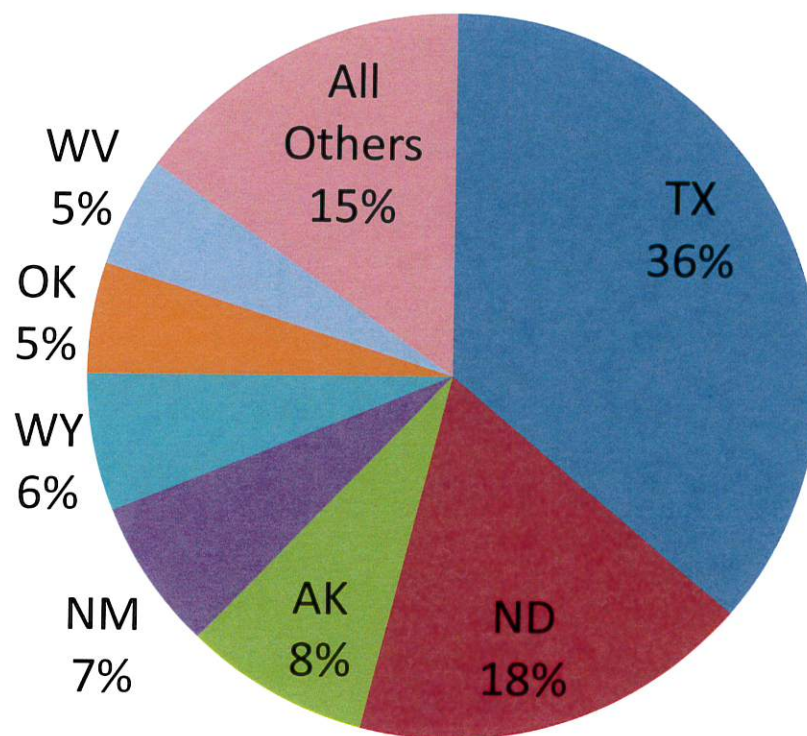
Severance Taxes: 1% of Total Tax in 34 States in FY2017

Source : U.S. Census Bureau

Share of Total State Tax Collections



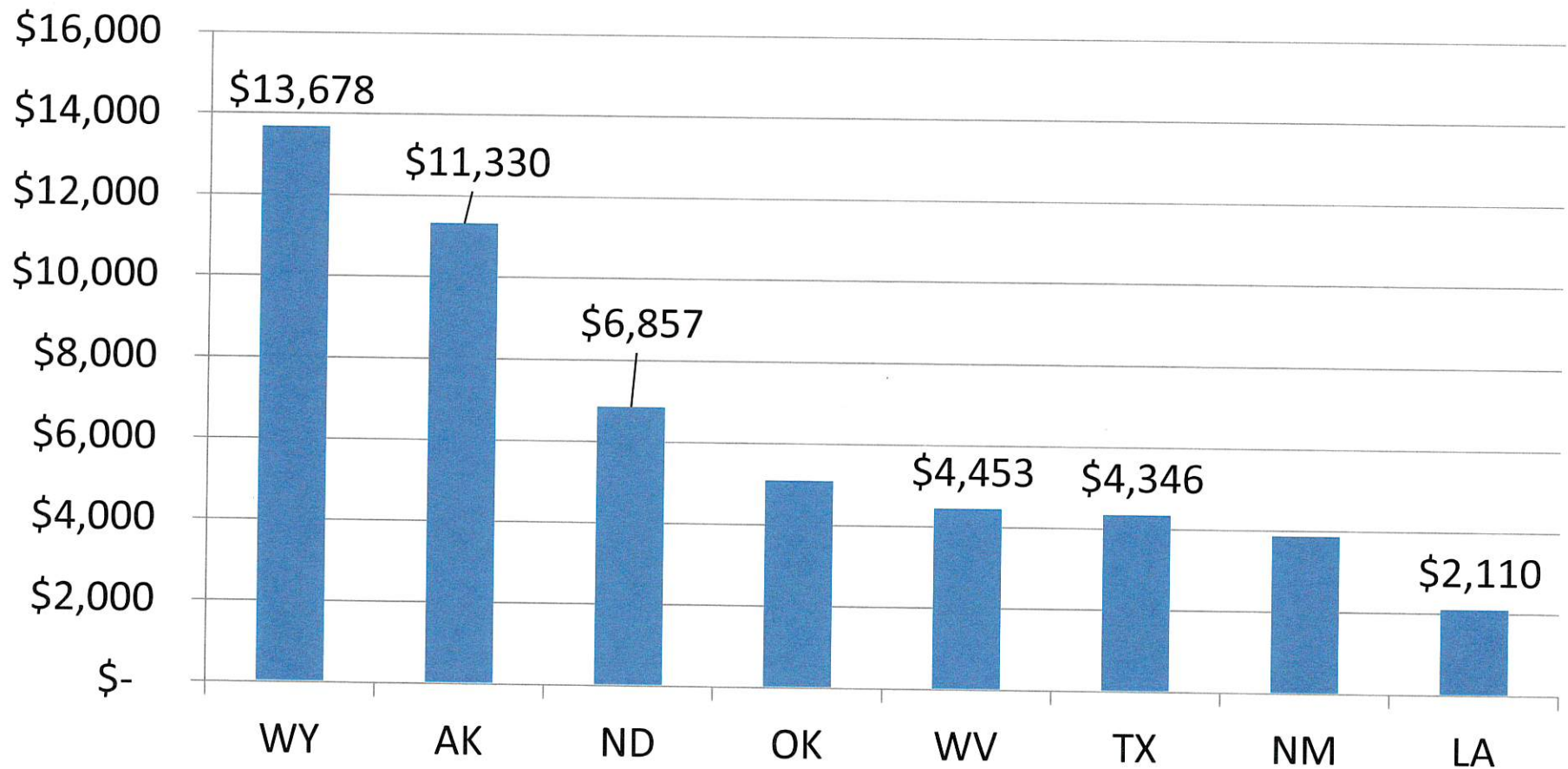
Share of Total Severance Tax



Relationship Between Economic Output of Mining Sector and Resident Population

Source: U.S. Bureau of Economic Analysis

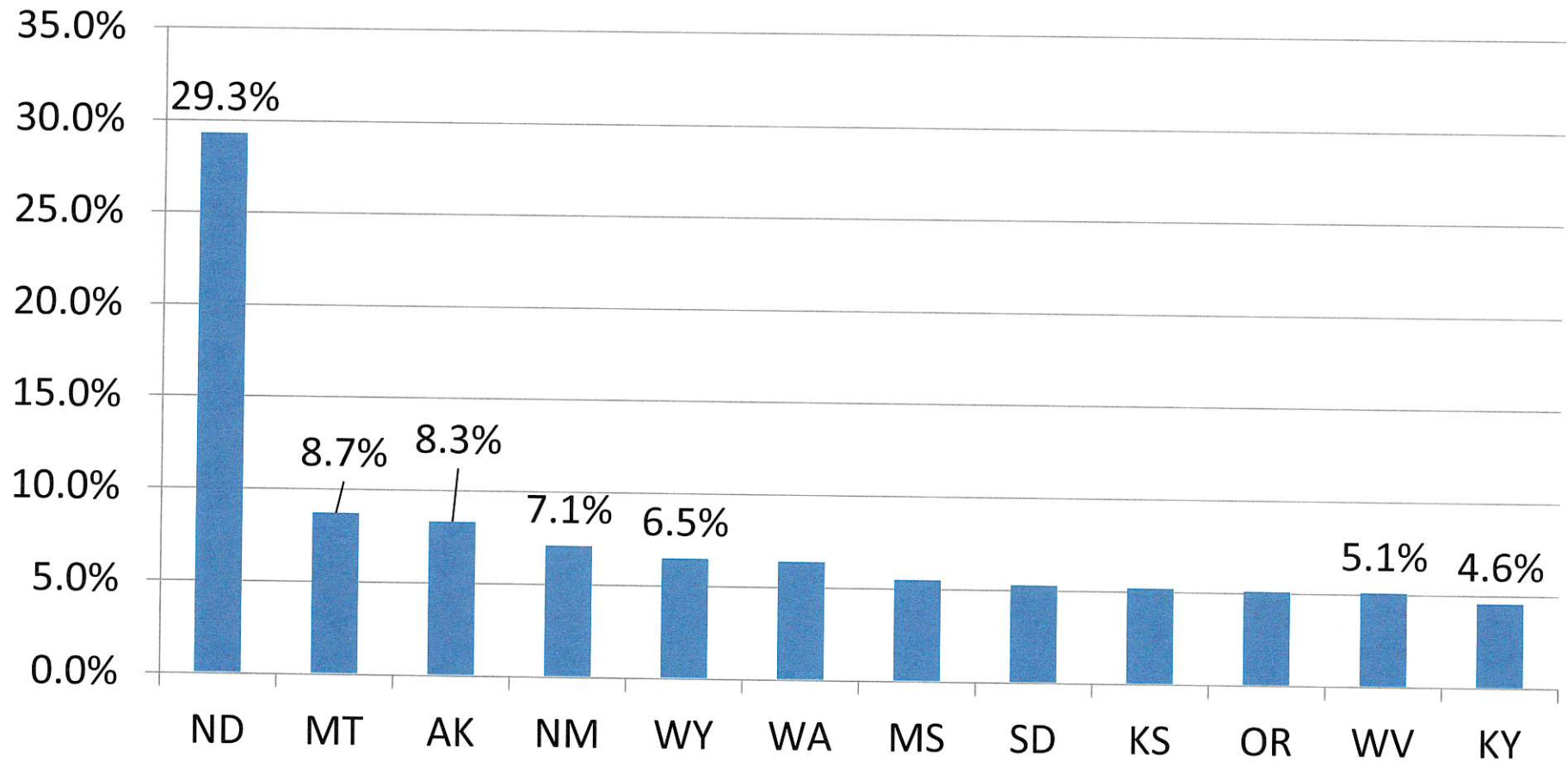
Per Capita Mining GDP-2017

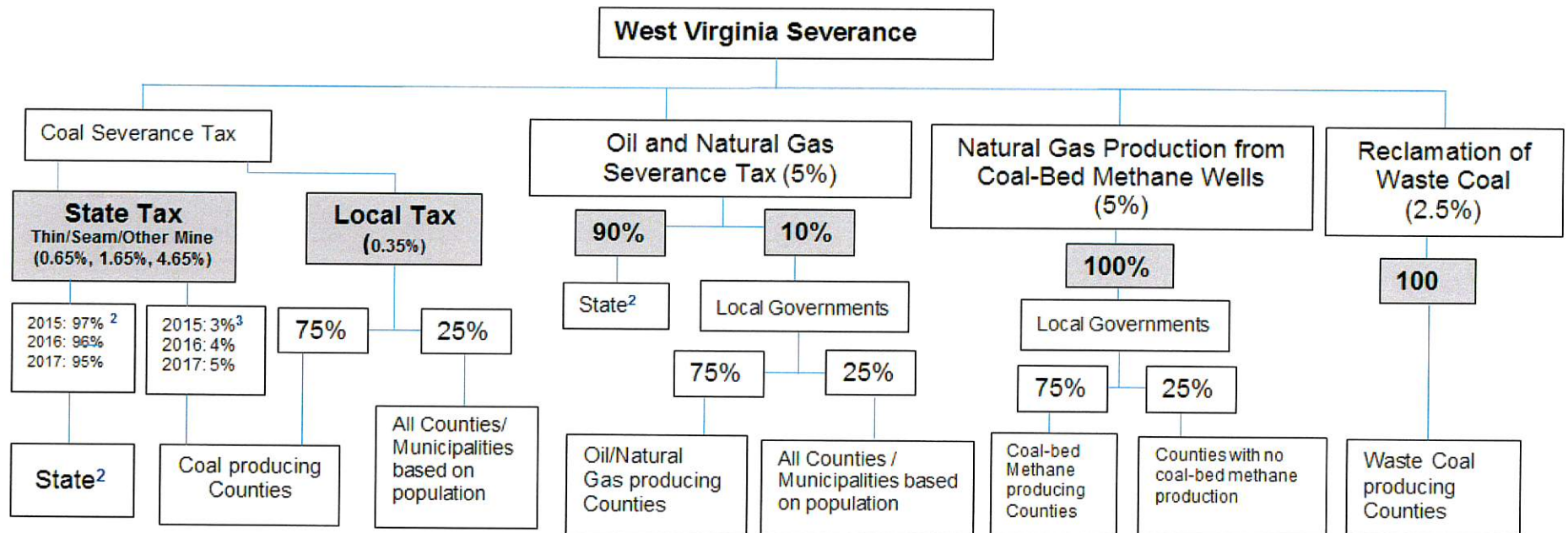


Relationship Between Severance Tax Yield & Economic Output of Mining Sector

Sources: U.S. Census Bureau & Bureau of Economic Analysis

Ratio of Severance Tax Yield to Mining GDP-2016-2017





¹ This represents severance taxes deposited into the General Revenue Fund and does not include the annual severance taxes allocated to the Debt Service Fund, or the severance taxes distributed back to local governments. The State Legislature temporarily suspended the regular 1.22% Severance Tax on timber dedicated to the Division of Forestry. Timber production in the State continues to be subject to an additional Severance Tax under the Workers Compensation Debt Reduction Act of 2005. When the unfunded accrued actuarial liability of the Old Fund has been paid, the regular timber Severance Tax of 1.22% will be reinstated.

² May be subject to a reduction of 3% for the Future Fund. See discussion regarding Future Fund herein.

³ The 5% Coal Severance Tax reallocation will be phased in over five years and began in fiscal year 2013 when 1% of the coal Severance Tax was reallocated back to the counties from which the tax was generated. This percentage will increase by 1% in each succeeding fiscal year until it reaches the maximum of 5% in fiscal year 2017. But the total reallocation of State coal severance tax to coal producing counties may not exceed \$20 million in any fiscal year.

⁴ The distribution of severance tax revenues from natural gas from coal-bed methane wells to local governments is capped at \$4 million a year, any additional revenues beyond this cap is retained by the State. To date severance tax from natural gas from coal-bed methane wells has not exceeded \$4 million in any year so the State has not retained any revenue from this source.

Severance Tax Summary FY 2017

	Regular State	Local Government	
	<u>Severance Tax</u>	<u>Tax Distribution</u>	<u>Total Severance Tax</u>
Coal	\$ 210,457,542	\$ 25,688,239	\$ 236,145,781
Natural Gas	\$ 99,941,819	\$ 9,950,820	\$ 109,892,640
Oil	\$ 14,044,877	\$ 768,049	\$ 14,812,926
Sand, Gravel	\$ 1,585,001	\$ -	\$ 1,585,001
Limestone, Sandstone	\$ 953,085	\$ -	\$ 953,085
Timber	\$ 1,336,937	\$ -	\$ 1,336,937
Other	\$ 16,392,363	\$ -	\$ 16,392,363
 Total	 \$ 344,711,625	 \$ 36,407,108	 \$ 381,118,734

Severance Tax Summary FY 2016

	Regular State	Local Government	
	<u>Severance Tax</u>	<u>Tax Distribution</u>	<u>Total Severance Tax</u>
Coal	\$ 190,902,362	\$ 27,820,221	\$ 218,722,583
Natural Gas	\$ 47,384,418	\$ 15,187,205	\$ 62,571,624
Oil	\$ 7,553,311	\$ 2,119,248	\$ 9,672,559
Sand, Gravel	\$ 1,592,107	\$ -	\$ 1,592,107
Limestone, Sandstone	\$ 1,458,381	\$ -	\$ 1,458,381
Timber	\$ -	\$ -	\$ -
Other	\$ 11,151,854	\$ -	\$ 11,151,854
 Total	 \$ 260,042,432	 \$ 45,126,675	 \$ 305,169,107

Severance Tax Conclusions

- **Severance Tax collections highly volatile**
 - Less than 1% of total tax collections
 - Declining over last decade
 - Revenue highest when supply tight relative to demand
 - Single year revenue variation may approach or exceed 50%
 - Alaska, North Dakota and Wyoming place significant sums in trust funds
- **Oil is Gold**
 - 3 states (TX, ND & AK) account for more than 52% of oil production & more than 62% of tax yield
 - Less pricing power with natural gas and coal
- **Difficult to Compare Across States**
 - Mineral quality and pricing vary
 - Some states (e.g., Alaska, Louisiana, Oklahoma & North Dakota) impose severance tax in lieu of property tax
 - Local governments impose an average of \$250 million per year in property taxes on mining activity in West Virginia

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Questions?