How to Structure a Severance Tax that is Fair to Pennsylvanians

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The Pennsylvania General Assembly is drafting legislation to institute a severance tax on the natural gas extracted from the Marcellus Shale formation. The state budget for Fiscal Year 2010-11 set a deadline of October 1, 2010 for enactment of a severance tax that would take effect in January 2011. No revenue from the tax was included in the final budget agreement.

Why a Severance Tax?

Every state with mineral wealth, *except Pennsylvania*, imposes a severance tax to compensate residents for the removal of nonrenewable resources. The 14 states with greater production than Pennsylvania, including Texas, Alaska, Wyoming, Louisiana, Arkansas, Oklahoma, and West Virginia, have severance taxes. All have booming extraction industries. Since 2004, production has grown at an average rate of 5.2% per year in these 14 states.[1]

The severance tax is an important source of state revenue to support services such as education, health care, environmental protection, early childhood education, and support for people with disabilities.

Fiscal Year	Severance Tax Revenue (in millions)[2]
2010-11[3]	$71
2011-12	$197
2012-13	$254
2013-14	$315
2014-15	$378

During the recent recession, the states with severance taxes fared much better than those without, as relatively high energy prices generated significant tax revenue. The Center on Budget and Policy Priorities notes that North Dakota and Montana were able to avoid budget shortfalls because of revenue from severance and other energy taxes.[4]

Natural gas severance taxes are typically structured as either a percentage of the sales price or as a fixed rate per thousand cubic feet (MCF) of natural gas, which is reset each year. Some producers in Pennsylvania have expressed a preference for having a fixed rate per MCF that is updated each year, as it may be easier to calculate and is more predictable.

[1] The average growth rate was calculated by the Pennsylvania Budget and Policy Center using marketed gas production data from the Energy Information Administration from the 14 states with greater natural gas production than Pennsylvania for the years 2004 to 2008.

[2] Revenue estimates by the Pennsylvania Budget and Policy Center assuming a constant selling price of $5 per thousand cubic feet (MCF), a fixed tax rate of $0.30 per MCF, and average well production of 950 million cubic feet (MMCF) over 40 years. Natural gas producers are claiming higher well production, but such production data have not yet been made public.

[3] Collections in 2010-11 assume tax effective January 1, 2011 with tax being collected the following month.

[4] Elizabeth McNichol, Phil Oliff, and Nicholas Johnson, *Recession Continues to Batter State Budgets; State Responses Could Slow Recovery*, Center on Budget and Policy Priorities, July 15, 2010, http://www.cbpp.org/cms/index.cfm?fa=view&id=711.

A severance tax in Pennsylvania will generate significant revenue that will grow over time as new wells come into production. At a rate comparable to neighboring West Virginia, a severance tax would raise $71 million in 2010-11 and nearly $400 million per year by 2014-15.

Mineral extraction is a dirty business.

Natural gas drilling creates environmental hazards from a water/sand/chemical cocktail used in the extraction process – known as frac water – and from the gas itself. Well construction requires new roads to be built through pristine areas. Each well drilled requires 800 to 2,000 heavy truck trips to transport giant drilling rigs and water tankers to the site.[5] This increased traffic requires frequent road reconstruction and bridge repair. Extraction industries are historically nomadic and boom-like, imposing social costs on rural communities including increased demand for public safety services and rapidly rising housing costs. For these reasons, severance tax revenue is often shared with local governments and set aside for environmental protection and remediation.

In drafting the severance tax legislation, Pennsylvania lawmakers should consider the following:

- **SET A REASONABLE TAX RATE**
  Some producers favor a fixed severance tax rate that is updated each year to reflect changes in the price of natural gas. If lawmakers agree to a fixed rate, it would make sense to set the initial rate comparable to neighboring West Virginia's in order to ensure that there is no tax incentive or disincentive for drilling in one state or the other.

  West Virginia uses a mixed tax rate, 5% of the sales price of a thousand cubic feet (MCF) of natural gas plus a fixed $0.047 per MCF. On a fixed rate basis, the tax rate for natural gas in West Virginia ranged from $0.26 to $0.35 per MCF in 2010.[6]

Natural Gas Selling Price	Tax Per MCF Using West Virginia Rate	Effective Tax Rate
$ 4.00	$ 0.247	6.18%
$ 5.00	$ 0.297	5.94%
$ 6.00	$ 0.347	5.78%

  Rates in some states are much higher; at a price of $6 per MCF, Oklahoma's rate is $0.43, the rate in Texas is $0.45, and New Mexico's rate ranges from $0.52 to $0.57.

  Based on current prices, Pennsylvania could set a rate between $0.30 and $0.35 per MCF and be more than competitive with other gas-producing states. A higher rate could be justified as Pennsylvania, unlike these other states, does not levy property taxes on oil or natural gas deposits. Pennsylvania's proximity to major

[5] Hazen and Sawyer, "Impact Assessment of Natural Gas Production in the New York City Water Supply Watershed," Washington Energy Policy Conference, March 9, 2010. http://csis.org/files/attachments/100309_PRush_NYDEP.pdf.

[6] Rate based on the industry standard Henry Hub price of natural gas from January to July 2010 which varied from $4.15 to $5.98 per MCF.

markets, the potential size and richness of the shale resource, relatively low cost of extraction, and the ability to quickly link into the existing gas pipeline infrastructure will continue to make it an attractive place to drill.

- **LIMIT UNCESSARY LOOPHOLES AND DEDUCTIONS**
  The natural gas industry wants to deduct production, processing, and transportation costs from its tax calculations. In other states, these types of deductions have created loopholes which the production companies have exploited. The tax should be easy to administer and reduce the likelihood of costly litigation.

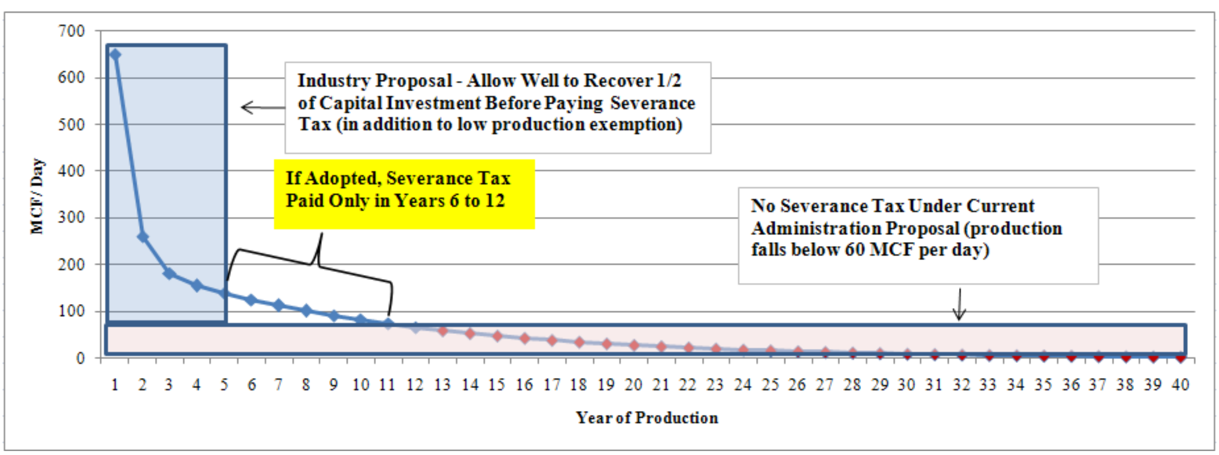
- **DO NOT PROVIDE A "CAPITAL RECOVERY" TAX BREAK**
  Industry advocates have been pushing for exempting or reducing the severance tax rate in the first years of production to allow drillers to recoup drilling costs more quickly. This sort of tax break is both unnecessary and costly. The federal government provides significant tax breaks for domestic energy production – most notably allowing companies to fully deduct drilling costs in the year they are incurred, rather than over the productive life of the well. Studies have shown that state incentives do little to stimulate drilling that would not otherwise occur.

  Most natural gas production (**53%, based on data from the Barnett Shale**) occurs in the first five years of an estimated 40-year well lifespan. Exempting this production from tax, or significantly reducing the tax rate during these early years, would reduce potential collection by up to half.

  Most accidents with wells occur during the drilling process. A tax break at the beginning would deprive revenue from state and local governments at the time when incidents are most likely to occur.

- **DO NOT INCLUDE A "LOW-PRODUCING WELL" EXEMPTION**
  In 2009, Pennsylvania's older shallow well industry succeeded in convincing lawmakers to exempt them from a severance tax by exempting any well that produces less than 60 MCF per day, which is the federal definition of "low-producing wells." The exemption is a loophole of questionable value. Moreover, the low-producing well exemption creates a giant windfall for Marcellus Shale wells, as it would exempt most of those wells from the tax for the last 25+ years of production.

  Coupling low-producing exemptions with capital recovery breaks could make only one-third of natural gas produced by a well subject to the severance tax.



- **ENACT LEGISLATION TO APPLY LOCAL PROPERTY TAXES TO OIL AND GAS**
  The oil and gas industry successfully sued the state to get an exemption from local property taxes. This exemption does not apply to coal or other minerals, nor does it apply to other Pennsylvania industries. The General Assembly should enact a law that overturns this 2002 court decision, allowing local governments to collect property tax. Most large gas-producing states also impose property taxes on gas-producing properties. To address legitimate concerns about how value is assessed, the General Assembly can require a single uniform assessment methodology.

- **CREATE A SENSIBLE PLAN TO SHARE REVENUE WITH LOCAL GOVERNMENTS AND ENVIRONMENTAL PROGRAMS**
  The primary responsibility of state government is to fund state services, which include education, health care, infrastructure, and human services, and the first goal of the severance tax should be to provide ongoing funding for these services.

  The majority of states with severance taxes reserve the bulk of severance tax revenue for general fund purposes. Many states also share revenue with local governments or environmental protection, or both. Many of the states that allocate funds for environmental protection use them for general fund purposes such as environmental regulation and wildlife conservation, or set aside the bulk of funds for water conservation and groundwater protection and remediation. Several states put funds into a permanent fund and allocate the earnings to the General Fund.

  West Virginia allocates 6% of its severance tax revenue to county governments. Wyoming distributes about 4%. Colorado allocates 50% of its tax to local governments, but gas companies can deduct property taxes from the severance tax so in practice the state severance tax raises and distributes very little to local governments.

  See Appendix 1 for severance tax distribution plans in 2010 Pennsylvania legislative proposals.

- **ENSURE TRANSPARANCY IN COLLECTING AND REPORTING DRILLING AND PRODUCTION DATA**
  In 2010, the General Assembly took a major step forward in eliminating the cloud of secrecy that surrounded the natural gas industry. Act 15 of 2010 requires natural gas producers to report production data twice a year beginning August 15, 2010. The Department of Environmental Protection, which collects the data, will make the information available to the public on the internet. This is consistent with most states' practice; in Texas, for example, the public has access to cost and production data for every gas well.

  Pennsylvania lawmakers should ensure that producers comply with this requirement and that the public has ready access to information about the location, output, and cost of wells in their communities.

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Appendix 1: COMPARISON OF 2010 SEVERANCE TAX LEGISLATIVE PROPOSALS

	George HB 1489 PN 3936	Levdansky HB 2443 PN 3607	Mirabito HB 2579, PN 3908					
			2010-11	2011-12	2012-13	2013-14	2014-15	2015-16+
Initial Tax Rate Per MCF (Adjusted Yearly)[1]	$ 0.35	$ 0.25	$ 0.30					
Dedicated Uses of Severance Tax Revenue								
General Fund	50%	45%	80%	75%	70%	65%	60%	50%
Environmental Stewardship Fund	15%	22%	4%	6%	7%	8%	9%	11%
Local Government Service Fund (split as follows)	20%	20%	12%	15%	17%	20%	24%	30%
Counties with producing wells	30%	30%	30%	30%	30%	30%	30%	30%
Municipalities in counties with producing wells		60%						
Municipalities with producing wells	40%		45%	45%	45%	45%	45%	45%
Municipalities without producing wells in counties with producing wells	20%		25%	25%	25%	25%	25%	25%
PEMA for grants to local fire and EMS companies	10%	10%						
Hazardous Sites Cleanup Fund	2%	2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Department of Public Welfare’s Low-Income Heating Assistance Program (LIHEAP)	2%	2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Pennsylvania Game Commission	2%	2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Pennsylvania Fish and Boat Commission	3%	4%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
County Conservation Districts	3%	3%	2%	2%	2%	2%	2%	2%
Oil & Gas Environmental Disaster Relief Account	2%		0%	0%	2%	3%	3%	5%
DEP Dam Removal	1%							

[1] Initial rates are also defined as floors for the tax rates.
In each proposal, the tax for the upcoming year is calculated by averaging the 5% of the current year's average price of natural gas and the previous year's tax rate.