

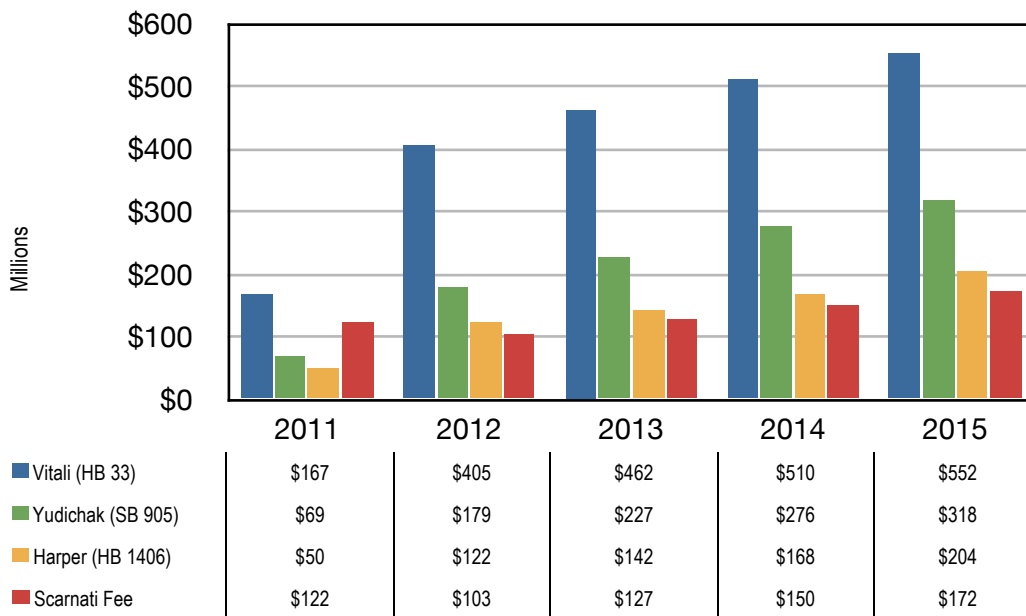


POTENTIAL PENNSYLVANIA ECONOMIC IMPACT OF FOUR NATURAL GAS SEVERANCE TAX/FEE PROPOSALS

Presented at Regional Economic Models Inc. Seminar, *Evaluating Fiscal Impacts: The Example of an Oil and Gas Severance Tax*, Harrisburg, Pennsylvania, May 18, 2011.

Revenue Proposals

Pennsylvania Budget & Policy Center Revenue Estimates Implied by Four Marcellus Shale Tax/Fee Proposals, 2011-2015



Source: Pennsylvania Budget & Policy Center (May 12, 2011). *Comparison of Legislative Proposals for Drilling Tax in the Marcellus Shale*. Retrieve from <http://www.pennbpc.org/sites/pennbpc.org/files/Comparing-Drilling-Tax-Plans-5-12-2011.pdf>

Tax/Fee Proposals:

Vitali (HB 33): An Act amending Title 72 (Taxation and Fiscal Affairs) of the Pennsylvania Consolidated Statutes, providing for taxation of natural gas drilling and for transfers and distributions.
<http://www.legis.state.pa.us/cfdocs/billinfo/billinfo.cfm?year=2011&sind=0&body=H&type=B&BN=0033>

Yudichak (SB 905): An Act amending the act of December 19, 1984 (P.L.1140, No.223), known as the Oil and Gas Act, imposing a natural gas severance tax; providing for collection of the tax; establishing the Natural Gas Severance Tax Fund and the Local Government Services Account; and providing for transfers and distributions of certain funds.
<http://www.legis.state.pa.us/cfdocs/billinfo/billinfo.cfm?year=2011&sind=0&body=S&type=B&BN=0905>

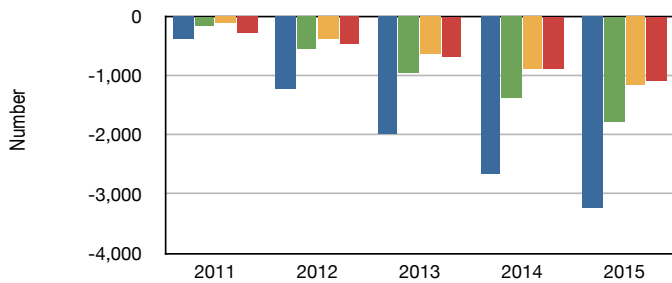
Harper (HB 1406): An Act amending Title 72 (Taxation and Fiscal Affairs) of the Pennsylvania Consolidated Statutes, providing for a natural gas severance tax.
<http://www.legis.state.pa.us/cfdocs/billinfo/billinfo.cfm?year=2011&sind=0&body=H&type=B&BN=1406>

Scarnati Fee: Marcellus Shale Impact Fee. <http://www.pasenategop.com/PDF/2011/marcellus-shale/impact-fee.pdf> and <http://www.pasenategop.com/PDF/2011/marcellus-shale/revenue-estimate.pdf>. Based on version introduced on 28 April 2011.

Revenue estimates made by the Pennsylvania Budget and Policy Center are based on a methodology introduced with the Scarnati plan for well size (3.8 BCF), number of wells per year until 2015, and price of natural gas (\$4.28 per MCF throughout estimate period) so that revenue estimates based on tax/fee proposals can be compared.

Impact Estimates

Potential Impacts on Employment

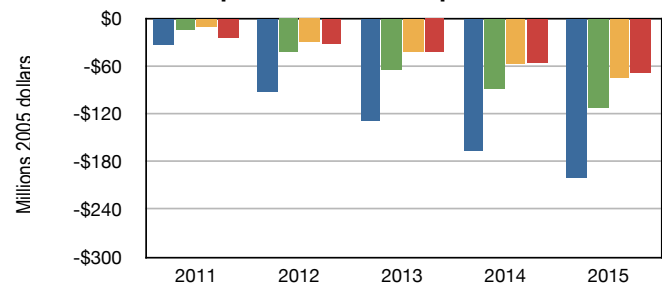


Vitali (HB 33)	-393	-1,234	-1,987	-2,663	-3,239
Yudichak (SB 905)	-165	-555	-960	-1,381	-1,782
Harper (HB 1406)	-120	-389	-640	-898	-1,164
Scarnati Fee	-290	-475	-682	-890	-1,089

Source: Estimates made by the staff of the Penn State Institute for Research in Training & Development using the Pennsylvania REMI PI+ Model.

Employment = The number of Pennsylvania jobs, full-time plus part-time, by place of work. This definition means that employment is reported as a count of Pennsylvania jobs, not as a measure full-time equivalent jobs. Also, this is not a count of the jobs held by Pennsylvania residents (who might work out of state), but of the jobs in Pennsylvania (which might employ nonresidents of Pennsylvania).

Potential Impacts on Real Disposable Income

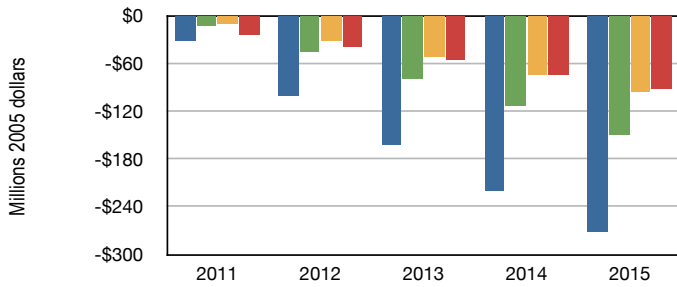


Vitali (HB 33)	-\$33	-\$92	-\$129	-\$166	-\$200
Yudichak (SB 905)	-\$14	-\$43	-\$64	-\$89	-\$113
Harper (HB 1406)	-\$10	-\$30	-\$43	-\$57	-\$75
Scarnati Fee	-\$25	-\$32	-\$43	-\$55	-\$68

Source: Estimates made by the staff of the Penn State Institute for Research in Training & Development using the Pennsylvania REMI PI+ Model.

Real disposable income = Disposable personal income (personal income—including wages and salaries; dividends, interest, and rent; and transfer payments—minus personal taxes and contributions to social insurance that is converted from place-of-work to place-of-residence) that is deflated by a price index. This measure is the real disposable income of Pennsylvanians (some of whom might work out of the state), not the income earned in Pennsylvania (some of which might be earned by nonresidents of Pennsylvania). This measure is presented in real dollars—that is, in dollar values that are adjusted for year-to-year price changes, with 2005 as the base year.

Potential Impacts on Gross State Product



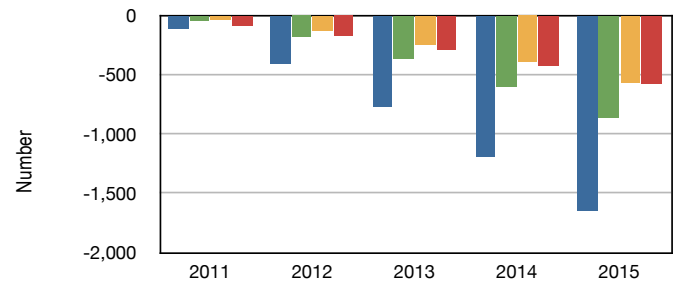
Vitali (HB 33)	-\$32	-\$101	-\$162	-\$220	-\$272
Yudichak (SB 905)	-\$13	-\$46	-\$79	-\$114	-\$150
Harper (HB 1406)	-\$10	-\$32	-\$52	-\$74	-\$96
Scarnati Fee	-\$24	-\$39	-\$56	-\$74	-\$92

Source: Estimates made by the staff of the Penn State Institute for Research in Training & Development using the Pennsylvania REMI PI+ Model.

Gross state product = The dollar value of economic output of Pennsylvania goods and services, excluding intermediate inputs. Gross state product is equal to consumption + investment + government purchases + net exports (exports – imports). This measure is presented in real dollars—that is, in dollar values that are adjusted for year-to-year price changes, with 2005 as the base year.

Estimates of the impact of the four tax/fee proposals were derived using a 70-sector REMI PI+ model of the Pennsylvania economy (version 1.2.6, Build 2391). First, a baseline forecast of the Pennsylvania economy through 2015 was made. Then, four policy forecasts through 2015 were conducted that introduced Pennsylvania Budget and Policy Center revenue estimates for each of the four tax/fee proposals as production costs to the Pennsylvania oil and gas industry. This approach assumes that an individual producer is a price-taker who cannot pass along added costs in the form of prices charged to natural gas users. This assumption is consistent with the use of the Henry Hub price futures and spot prices as a national price benchmarks. Differences between the policy and baseline forecasts represent the potential impacts.

Potential Impacts on Population



Vitali (HB 33)	-144	-408	-772	-1,191	-1,647
Yudichak (SB 905)	-49	-185	-369	-600	-866
Harper (HB 1406)	-35	-130	-249	-386	-570
Scarnati Fee	-85	-176	-289	-423	-573

Source: Estimates made by the staff of the Penn State Institute for Research in Training & Development using the Pennsylvania REMI PI+ Model.

Population = Mid-year estimates of the number of people residing in Pennsylvania, including survivors from the previous year, births, special populations, and three types of migrants (economic, international, and retired). Population change is affected by changes in total migration, changes in special populations (i.e., prisoners, the college population and military personnel and their dependents), natality rates, and survival rates. The REMI Policy Insight model is unique because it joins Pennsylvania population changes to economic changes in Pennsylvania through specific equations and, through these equations, captures their joint and reciprocal effects. For instance, an increase or decrease in Pennsylvania employment and income opportunities could stimulate or retard, respectively, migration in and out of the state. In addition, changes in the production costs and profitability of Pennsylvania industries could cause firms to migrate to or from the state, which, in turn, could induce or dampen migration of individuals to and from the Commonwealth.