

## **Background**

West Chester BLUER (Borough Leaders United for Emissions Reduction) is a Borough Council-appointed committee, with a mission to reduce greenhouse gas emissions (i.e., CO<sub>2</sub>, methane) in West Chester 10% by 2015 over 2005 levels ([www.wcBLUER.org](http://www.wcBLUER.org)). BLUER has been asked by Rep. Truitt to weigh in on the Marcellus Shale impact fee proposals now under consideration in the PA legislature. This position paper outlines our broader concerns about natural gas hydraulic fracturing, and provides comment on three proposals now under consideration.

## **Part I: The Big Picture**

BLUER's greatest concern about natural gas hydraulic fracturing (fracking) is its contribution to climate change. Climate change fundamentally threatens our ability to sustain life, because it deeply impacts our fresh water and food supplies, causes violent weather patterns, and threatens to eliminate entire, heavily populated, coastline communities.

Many view natural gas as a "bridge fuel" in the inevitable transition away from conventional fossil fuels (coal, oil) to cleaner, renewable sources (solar, wind, fuel cells, certain biofuels). This is because natural gas emits less CO<sub>2</sub> per BTU of energy input than coal, oil, or PECO-generated electricity. CO<sub>2</sub> is the most prevalent greenhouse gas.

Unfortunately, emerging research from Cornell University<sup>1</sup> suggests that the fracking process itself may release substantial amounts of methane due to flow-back fluids from drill-out of the wells. (Once the well is ready for production, the drill-out phase entails the removal of plugs, allowing previously contained gas to flow.) Methane is a potent greenhouse gas; it is more than 20 times as powerful at trapping heat in the atmosphere as CO<sub>2</sub>. This causes the overall greenhouse gas footprint of shale gas to be greater than that of conventional gas and

oil, which have no drill-out phase. And while this is an early study, updated EPA estimates confirm that fugitive methane emissions during fracking are a serious concern.<sup>2</sup>

These data have been attacked by critics, but we urge our representatives to see through their motives. For years, the fossil fuel industry has waged a full-scale, multi-pronged attack to inject doubt into the existence of human-induced climate change.<sup>3</sup> This comes in the form of questioning the validity of any/all climate change research by highlighting facts out of context, changing the arguments against climate change as new data emerge, and even framing excessive fossil fuel consumption as an American right and freedom. We urge all of our representatives to represent the true interests of all people – and businesses – by fighting for a clean energy economy. This is our only viable path to future economic success and sustainability.

We also feel it is important to point out that the fossil fuel industry enjoys sweeping exemptions from provisions in federal environmental statutes that exist to protect the environment and human health.<sup>4</sup> BLUER was astounded to learn that natural gas drillers are exempt from the Safe Drinking Water Act, the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Toxic Release Inventory, and more.<sup>4</sup> Data also show that approximately 80% of Marcellus drillers pay no PA local or state taxes.<sup>5</sup> This is due in part to the fact that PA law allows these firms to shift income to tax-haven states like Delaware. This is alarming to us, because it constitutes unfair competition. Leveling the playing field can make a critical difference and will allow clean energy markets to develop faster. This would move our local and national economy closer to a truer free-market system and allow clean energy markets to develop faster.

## **Part II: Marcellus Shale Impact Fee Legislation**

### *The Bills*

Currently, HB 1700 and 33 are the best-known House bills dealing with natural gas taxation. SB 1100 is the best known such bill in the Senate.

The SB is unique from the HBs in a number of ways:

- SB 1100 generates less revenue for a shorter amount of time. It assesses a fee on wells for the first 10 years of production only, and has an effective tax rate (ETR) of only 1%. Both HBs assess a fee through the productive life of the well, at a higher ETR.

HB 1700 assesses a fixed annual fee according to a predetermined schedule, equivalent to an ETR of 4.4%. HB 33's ETR is 5% plus 4.6% per 1,000 cubic feet of gas extracted.

- SB 1100 takes zoning rights away from municipalities and people by requiring municipalities to adopt a model drilling ordinance before they can benefit from an impact fee. Neither HBs contain restrictions on zoning or property rights.
- SB100 does not earmark any funds for the Environmental Stewardship Fund (Growing Greener), parks, greenways, farmland or forest preservation. Both HBs contain environmental protection allocations.

*BLUER Evaluation*

The primary differences between the two HBs, besides the difference in revenue generation, is that HB 33 allocates one-third of the revenues to the general fund to help address the statewide budget shortfall while still generating more revenue for local government services and the Environmental Stewardship Fund. (See Figure 1.)

**Figure 1.**

2012 Distribution of Proceeds (\$ millions)	Vitali	Scarnati	Quinn
	HB 33	SB 1100	HB 1700
General Fund	\$ 129.6	\$ -	\$ -
Commonwealth Finance Authority	-	31.6	-
Environmental Stewardship Fund	119.9	-	59.5
Local Government Services	129.6	59.2	119.1
Counties with producing MS wells	\$ 38.9	\$ 21.3	\$ 59.5
Municipalities with producing MS wells	58.3	21.9	59.5
Municipalities in MS counties without MS wells	19.4	16.0	-
PEMA grants to fire/ambulance companies in MS counties	13.0	-	-
LIHEAP	5.3	-	-
Hazardous Sites Cleanup Fund	6.5	3.9	-
Conservation Districts	5.3	7.5	11.9
Fish and Boat Commission	5.7	-	-
DEP Dam Removal	3.2	-	-
Motor License Fund	-	3.9	47.6
<b>Total Distribution</b>	<b>\$ 404.9</b>	<b>\$ 106.2</b>	<b>\$ 238.2</b>

Source: PA Budget & Resource Center

(<http://pennbpc.org/comparing-rep-quinns-marcellus-drilling-fee-other-plans>)

BLUER evaluated these bills based on three criteria: Contribution to climate change mitigation/adaptation, revenue generation, and revenue allocation.

1. *Contribution to climate change mitigation/adaptation.*

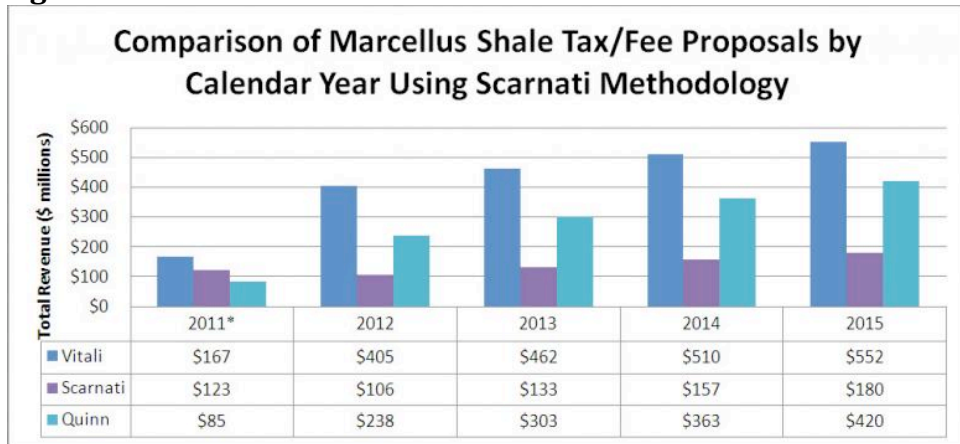
None of the bills directly correlate fracking or natural gas

harvesting/combustion with the harmful impacts of climate change. However, by allocating funds to the Environmental Stewardship Fund (Growing Greener), both HBs can help mitigate climate change by preserving open space and protecting life-sustaining watersheds. Open space preservation can help reduce sprawl development and the increased energy consumption that accompanies it (i.e., building construction/energy use, increased commuting). Watershed protection can help preserve natural CO<sub>2</sub> sequestration by maintaining forest cover along watersheds. Growing Greener can also help communities adapt to climate change by investing in water and sewer infrastructure. Experts predict (and we are now experiencing) periods of drought interspersed with significant precipitation and worsening storms – a situation that creates substantial runoff and overtaxes municipal wastewater systems.

2. *Revenue generated over time.*

As stated earlier, both House bills assess fees through much of the life of the well. Both generate significantly more revenue than Senate Bill 1100, with HB 33 generating the most (Figure 2).

**Figure 2.**



Source: PA Budget & Resource Center

(<http://pennbpc.org/comparing-rep-quinns-marcellus-drilling-fee-other-plans>)

While some argue that a higher fee will discourage gas drilling, this is a false argument promulgated by the fossil fuel lobby. Ninety-six percent of the natural gas produced in the U.S. comes from states with severance taxes,<sup>6</sup> and producers can still expect substantial returns on investment, estimated at 60% or more.<sup>7</sup> In addition, studies clearly show that tax rates have little effect on natural gas production. Rather, drilling decisions are based on location of reserves and the expected

price of natural gas.<sup>6</sup> These same studies show that tax breaks, while creating windfalls for gas companies, do little to stimulate additional production and have little impact on jobs.

On top of this, the Marcellus Shale formation is a uniquely profitable prospect. By virtue of sheer volume alone, the formation promises to be highly productive. Known as the Saudi Arabia of natural gas, the formation is roughly the size of Greece and has been compared with the Gold Rush. What's more, Marcellus wells are much cheaper to drill than other formations because the shale is replete with natural fractures, making drilling faster and easier than in other formations.<sup>8</sup> The formation is also closer to northeastern markets than competitive states.

In PA, drillers enjoy even more advantages: Huge tax breaks. Texas has about 34 times as much oil and gas drilling as Pennsylvania, but took in 200 times as much in taxes from the industry.<sup>9</sup> As stated earlier, 80% of drillers paid no state or local taxes in 2008. In addition, the top ten Marcellus Shale permit holders pay no corporate net income tax (CNIT); instead, they formed as LLCs or partnerships to avoid the 9.99% CNIT and pay only the 3.07% personal income tax (PIT).<sup>9</sup> In addition, PA does not tax purchases of drilling equipment and supplies because they are considered manufacturing expenses, and companies do not pay property tax on gas reserves in PA like they do in other states.

Even with all of these advantages, the largest revenue-producing bill of the three (HB 33, which proposes 5% of gross value plus 4.6% per 1K cu ft) still puts PA below a dozen other states when it comes to shale gas severance tax rates, among the 28 states with severance taxes in play.<sup>10</sup>

Finally, we do see value in HB 1700's fixed fee formula, because it will help ensure a predictable revenue stream. However, the Marcellus formation is the largest reserve in the country, and the global demand for energy is rising. The formula in HB 33, which is more closely tied to production, may pay off in greater revenue over time.

### 3. *Revenue allocation.*

As mentioned, BLUER supports maximizing the allocation of severance tax revenue to any/all efforts that help us mitigate and adapt to climate change. According to the PA Budget and

Policy Center, HB 33 generates the most revenue for this purpose (Figure 1).

BLUER also supports allocation of some funds to the Low Income Home Energy Assistance Program (LIHEAP, HB 33), as these funds are typically leveraged with the Department of Energy's Weatherization Assistance Program. This promotes residential energy efficiency, and is a critical step to reducing fossil fuel consumption and greenhouse gas emissions in the residential sector.

Although beyond the scope of this request, BLUER also appreciates the fact that both House bills put significantly more revenue to the municipalities affected by Marcellus Shale impacts than the Senate proposal.

**We have ranked the three bills in the following order of priority based on this evaluation:**

**#1 – House Bill 33**

**#2 – House Bill 1700**

**#3 – Senate Bill 1100.**

### **Part III. Additional Observations**

The BLUER Committee also strongly recommends the following:

- 1- *No measure should in any way usurp the zoning authority of local municipalities or the property rights of landowners. SB 1100 authorizes gas drilling as a permitted use **by right** in all zoning districts, except residential districts where it would be permitted only as a conditional use or special exception. BLUER objects to this inappropriate use of power and supports the authority of the municipality to regulate its own community, and protect its own resources. We object strongly to forced pooling. *We greatly appreciate the fact that the House bills do not undermine these rights.**
- 2- *The tax should be simple and without loopholes. A complex measure that permits too many exceptions will be difficult to enforce. In addition, ambiguous legislative language can reduce collections. In Utah, ExxonMobil was able to significantly reduce its tax liability by paying tax on the gas it removed*

based on its value coming directly out of the well (even though it was never sold in that form), rather than its actual sales price, due to the way the law was worded.<sup>10</sup>

- 3- *No measure should allow lower rates or exemptions for stripper, low-volume or high-cost wells.* Such a measure would perversely incentivize environmental damage (i.e., more wells) and increase costs to the communities – all for less natural gas production.
- 4- *The new ProtectPA legislation (introduced into the House in July 2011 by George, Dermody, Hanna and 25 co-sponsors) contains essential protection measures that should be fully supported.*<sup>11</sup> This bill would increase the distance that wells may be placed from public drinking water sources, require better disclosure of the chemicals used in hydraulic fracturing, update bonding and road-repair requirements, and extend a well operator's presumed liability in cases of well pollution. Other requirements include "cradle-to-grave" tracking of Marcellus wastewater, expanding pre-drilling survey rights for landowners, and prohibiting open-pit 'frac' water storage in flood plains.

While these “restrictions” are viewed by some as limiting to industry, they are essential, because the environmental costs of fracking are not currently internalized by the natural gas industry. Rather, environmental pollution and natural resource destruction is wrongly considered a byproduct of the harvesting process, and the burden of these costly and devastating impacts is left to society.

This also puts clean energy companies at a disadvantage. For example, wind and solar energy do not pollute groundwater, but this benefit cannot be translated into an economic advantage because the natural gas industry is not held accountable for the pollution it creates. The measures in the ProtectPA legislation at least begin to lay the foundation for internalizing these costs and leveling the playing field in the energy market.

The ProtectPA bill would also allocate more than \$72 million annually to the Environmental Stewardship Fund, more than \$96 million to Pennvest for plants that treat drilling wastewater, and more than \$169 million to a local government services account. This measure does not allocate any revenue to the general fund, which is a stated desire of the Governor.

*Note: Water contamination is a serious concern with fracking and places a cost and health burden on society, even in states with regulations in place.<sup>12</sup> Anywhere from 10% to 40% of the water sent down the well during hydrofracking returns to the surface, carrying drilling chemicals, very high levels of salts and, at times, naturally occurring radioactive material. While most states require drillers to dispose of this water in underground storage wells below impermeable rock layers, PA has few such wells and is the only state that has allowed drillers to discharge much of their waste through sewage treatment plants into rivers. And while drillers are recycling some of the water, the shale boom in PA will produce substantial amounts of wastewater that has potential to contaminate drinking water or enter the food chain, causing cancer and other health problems. Fracking operations produce bromides that, when combined with chlorine disinfectants from wastewater treatment plants, form brominated trihalomethanes (THMs), a volatile organic compound linked to cancer and birth defects. In the states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming, more than 46 million barrels of drilling waste were produced in 2006.<sup>13</sup>*

- 5- In future proposals, consider placing a fee or tax on each well until it is properly and verifiably plugged and cleaned up. This “pay to plug” structure would incentivize drillers to properly close up wells after they stop producing. The state’s experience with abandoned coal mines, and the destruction left behind after harvesting, should offer a lesson. A system that does not fine companies for improperly abandoned sites but requires them to pay until they are properly closed would be much more effective in reducing this burden to society.

#### **Part IV: Conclusion**

According to a Quinnipiac University poll from June, 69% of voters surveyed support a tax on natural gas drilling companies. Based on voter support and all of the conditions outlined in this report, a bill that levies a decent severance tax is not only reasonable, but is good policy. This should be combined with environmental protections and a maximum Growing Greener allocation. BLUER strongly prefers the House bills to the Senate bill. We also prefer the revenue formula and allocation structure in House Bill 33, along with the environmental protections presented in ProtectPA. These protections lay the groundwork for internalizing the extensive environmental costs of fracking.

Finally, we understand that time is of the essence. PA has lost an estimated \$225 million in potential drilling tax revenue since October 2009 due to inaction on the part of the General Assembly, and this figure is accelerating rapidly.<sup>6</sup>

*BLUER wishes to thank Representative Truitt and his staff for their time and interest.*

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