ALLEGHENY INSTITUTE
FOR PUBLIC POLICY

May 3, 2013 **Policy Brief: Volume 13, Number 23**

2012 Drilling Fee Revenue Slips Below 2011 Collections

On April 1st, drillers operating in Pennsylvania's Marcellus Shale formation were required to pay their annual well fees to the Commonwealth. As discussed in *Policy Briefs Volume 12*, *Numbers 11*, *21* and *51*, Act 13 of 2012 gave counties with unconventional (Shale) drilling within their borders the option of charging a fee on each well. All counties have in fact done so. Revenue from this new fee, collected in 2012, provided $206 million to be shared among state agencies, counties, and municipalities. However, in 2013 fee revenue slipped to $198 million. Is the revenue reduction a one-time event, or the start of a trend?

The fee as outlined in Act 13 is based in part on the market price of natural gas and is structured so that, over time, the charge on wells drilled in earlier years decreases. There is also a distinction made for vertical wells in the Marcellus Shale formation which are only charged twenty percent of the fee since they are deemed less intrusive than multi-bore horizontal wells. The Public Utility Commission (PUC) recognized 4,449 total wells in the formation with 4,031 wells being designated as horizontal wells subject to the $50,000 fee (the remainder was classified as vertical). As 2012 dawned, these wells graduated into year two of the fee structure while any wells drilled in 2012 entered the first year in the system.

To understand why the fee revenue for 2012 is lower than 2011, we need to examine the two most important factors in this determination—the price of natural gas and the drilling activity that actually took place in 2012.

The fee structure takes into account the spot price of natural gas as traded on the market. In 2011, the annual average price came in at just over $4.00 triggering the $50,000 per well fee. But the price had fallen by more than 30 percent in 2012 to $2.79. At this price, any well drilled (spud) in 2012 (their year one) will be charged $45,000. Also, the second year wells will see their fee reduced by $15,000 to $35,000. Therefore the wells that had generated $206 million in 2011 generated approximately $144 million in 2012. The other $54 million or so is coming from new well fees. So as a result of the lower price there has been a reduction in the fee amount per well—both new and existing. The advent of extraction in the Marcellus Shale formation has increased the supply of natural gas, putting downward pressure on the trading price, helping to trigger the lower fees. Through the first quarter of 2013 the price has begun to rise, reaching an average of $3.61

and could boost per well fees in 2013. Bear in mind that fees will fall again for older wells due to the aging provision.

And of course the amount of money collected is also dependent upon the number of wells spud. As mentioned above 4,449 total wells had been spud through the end of 2011. In 2012, the PUC has documented 1,357 new wells. This is a thirty percent drop from 2011 when 1,937 wells were spud. In fact, 2011 represents the high water mark for activity. In 2010 there were 1,454 wells spud and only 763 in 2009. Thus it appears as though the increase in the supply in natural gas and the resulting drop in price has also curtailed new drilling in the Commonwealth.

Where are the wells concentrated? It has been suggested that the Marcellus formation is producing both wet and dry gas. Wet gas, primarily found in the western Pennsylvania counties (as well as in Ohio and West Virginia), contains other compounds such as ethane that can be separated (cracked) and sold for other uses. Dry gas, found mostly in the north/central counties is more limited in use. The lower price of gas makes the wet gas more desirable as money can be made on the other compounds as well.

Through 2011 there were 37 counties that contained wells linked to Marcellus Shale. Two more counties, Crawford and Mercer, added wells in 2012 for a total of 39. However as noted above, there were fewer wells drilled in 2012 than in 2011. In fact twenty-two counties saw a decrease in drilling activity including northern tier stalwarts Bradford (-60 percent), Tioga (-53 percent) and Lycoming (-29 percent). Only three of these counties were located in western Pennsylvania—Greene (-4 percent), Indiana (-91 percent) and Westmoreland (-35 percent). Thirteen counties had an increase in drilling activity with only Sullivan (42 percent) not in the western part of the state. The remaining four (Bedford, Huntingdon, Luzerne, and Wayne), not only did not have any change in activity they did not have any wells spud in either 2011 or 2012.

However, a drop in new wells being spud does not necessarily translate into a decrease in production. State law requires that drilling companies report their output to the Department of Environmental Protection. While this data is raw, it does allow us to approximate overall production statewide as well as within each county. Total Marcellus Shale drilling production in Pennsylvania for 2011 was reported to be 1.070 billion mcf (thousand cubic feet). Production in 2012 was reported at 2.065 billion mcf—an increase of 93 percent. Thus even though fewer new wells came online in 2012, overall production from this formation nearly doubled.

At the county level, of the 34 counties that produced gas from Marcellus Shale formation from 2011 to 2012, only four counties reported a decrease in production: Cambria, Cameron, Potter, and Warren with the latter the only western county. And with the exception of Potter (73), the other three don't have many wells within their borders—Cambria (7), Cameron (14), and Warren (3). In fact eleven counties reported output levels that had doubled from 2011.

Even though there were fewer wells drilled in 2012 than 2011 or 2010, there remain a large number of permits issued that have yet to be used, which suggests that drilling in the Marcellus Shale formation will continue for quite some time. Bear in mind that the amount received by the state and then distributed to the counties and municipalities will vary from year to year as market conditions change. Thus it would be unwise for any level of government to view the amount of revenues from Act 13 as set in stone.

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