ALLEGHENY INSTITUTE FOR PUBLIC POLICY

May 30, 2013 **Policy Brief: Volume 13, Number 27**

Marcellus Royalty Payments Rising Rapidly

From all accounts natural gas drilling in the Marcellus Shale formation has been an economic boon for Pennsylvania. While the exact overall impact may be up for debate, what is not debatable is the benefit for owners of the land and/or mineral rights where wells are located. This is evidenced by the increase in royalty income shown on state income tax returns. As we first reported in a 2011 report (Report #11-05), the number of tax returns containing rental and royalty claims has increased greatly since drilling began in 2007 and "offers the clearest and most conclusive evidence of the potential financial impact arising from Marcellus Shale drilling activity."

From 2006, (pre-drilling) until 2010, the most recent data available, the overall number of income tax returns in Pennsylvania showing rent and royalty income claimed under the section "rents, royalties, patents, and copyrights" climbed by 19 percent. For those counties with Marcellus activity, the increase was 29 percent but only 10 percent for those without. For the counties with the greatest activity, mostly in the northern tier of the state, the rise in returns has been the largest. Susquehanna (up 192 percent), Sullivan (180 percent), Wyoming (165 percent), Bradford (145 percent) and Tioga (129 percent) had the biggest gains while the rest of the top ten counties in terms of jumps in returns with royalties, posted a gain of at least 45 percent. While the number of returns provides a good indication, it is not definitive proof. It is also instructive to look at the amounts of royalties claimed on these income tax returns.

As expected the amount of rents and royalties income reported on Pennsylvania tax returns has also jumped significantly. Statewide royalty income rose 61 percent from 2006 to 2010 with an increase of 119 percent in counties with Marcellus Shale drilling activity. Rent and royalty income in counties with no Marcellus activity moved up by a comparatively slow 34 percent. Northern tier counties Susquehanna, Sullivan, and Tioga each had huge jumps of more than one thousand percent. In Susquehanna the amount claimed in 2006 was $8 million and by 2010 it had topped $133 million—a gain of over 1,500 percent. In fact the top ten counties in terms of growth, seven in the northern tier and Greene, Washington, and Butler counties in the Pittsburgh area, all reported rent and royalty income increases of at least 200 percent.

In our 2011 report we examined the seven county Pittsburgh metro area which, from 2006 to 2008, had an average increase of 50 percent in this taxable income category. The updated data, now covering the 2010 tax year, shows the average rise to be 107 percent led by Washington County's increase of 289 percent (up from 113 in the original study) and Butler County's increase of 201 percent (up from 57). The smallest increase in the Pittsburgh metro belongs to Allegheny County, now at 41 percent (up from 17). In short, royalties are rising rapidly.

While the data show a substantial jump in rent and royalty taxable income, what exactly is included in rents and royalties and how are they calculated?

Land owners fortunate to own property above the Marcellus Shale formation have been able to collect lease payments for their acreage as well as royalty payments on the gas extracted from that property. Royalties represent a share paid to the owner of the mineral rights to extract and sell the mineral. According to the president of the National Association of Royalty Owners, Pennsylvania Chapter (NARO—PA), the lease payments and royalty payments due to a particular land owner are negotiated in individual contracts. However, Pennsylvania law (Act 60 of 1979) stipulates a minimum royalty payment of 12.5 percent of the value of gas "…removed or recovered from the subject real property". The NARO-PA president notes that the typical royalty percentage was typically not above 12.5 percent in the beginning, but as the boom progressed the royalty share has ranged up to 20 percent, depending on the individual contract.

The royalty payment of course depends upon the quantity produced in a time period, and the price at which the gas is sold. NARO—PA notes the most commonly used price is the trading price on the New York Mercantile Exchange (NYMEX), usually at some price point specified at a particular day of the month. The royalty owners are typically paid on a monthly basis, unless otherwise specified in the contract. Gas companies are allowed to deduct transportation fees (post-production costs) from royalty checks, but cannot deduct well fees, such as the impact fee, from the royalties.

With this information, we can estimate the total royalties paid in Pennsylvania from Marcellus Shale production from 2008 through 2012. In 2008, the amount of gas taken from the Marcellus Shale was reported to be 9.8 million mcf (thousand cubic feet). The average price of natural gas that year using the NYMEX was $8.899 per mcf. Thus the revenues from the Shale gas should have been approximately $86.95 million. Using 12.5 percent for royalties, royalty payments would have been around $10.9 million to the owners of Shale mineral rights. To keep this in perspective the Bureau of Economic Analysis (BEA) notes that in 2008 the amount of personal income in Pennsylvania was about $513 billion. Thus these royalty payments account for about 0.002 percent of state personal income.

However, as more wells were drilled, production expanded greatly over the next few years so that in 2012 more than 2.065 billion mcf of natural gas was extracted from the Shale. However, the average price in 2012 had fallen, in part to the increased supply, to $2.83. The estimated gas revenues for 2012 are in excess of $5.85 billion. Again using 12.5 percent as the royalty percentage gives an estimated $731 million in royalties for 2012. Thus royalty income paid to owners of land/mineral rights in Pennsylvania skyrocketed by more than 6,600 percent thanks to Marcellus Shale. The BEA's estimate of personal income for 2012 was just above $556.7 billion, so royalty payments from Marcellus Shale accounts for about 0.13 percent of that income. While this is still a very small portion of the total, it has certainly grown over the last five years, reflecting the massive rise in royalty payments. Indeed, NARO uses 18 percent as the royalty share resulting in an estimate of $1.2 billion in royalty payments. And while the state income as a whole is not boosted significantly in percentage terms, royalty incomes in the counties where drilling and production activity are heaviest are certainly having a measurable effect on the county's total income.

The Marcellus Shale gas boom has produced major economic benefits to the Commonwealth of Pennsylvania. Beyond the growth in drilling related jobs and the jobs created in several supply and related industries, accommodations for out of state workers, restaurants and retail with the incomes associated, land owners who have lease and/or royalty payments are doing well indeed.

Frank Gamrat, Ph.D., Senior Research Associate

Allegheny Institute for Public Policy
305 Mt. Lebanon Blvd.* Suite 208* Pittsburgh PA 15234
Phone (412) 440-0079 * Fax (412) 440-0085
E-mail: aipp@alleghenyinstitute.org