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What's the Deer Lakes Park Drilling Proposal Worth?

Perhaps one of the most contentious issues facing the Allegheny County Chief Executive and Council is whether or not to allow natural gas drillers access to reserves located in the Marcellus Shale formation under Deer Lakes County Park. As expected, there is plenty of opponents citing environmental concerns, but little has been mentioned about the potential economic benefits of such a venture. This Brief will look at the potential economic benefits to the County if it permits natural gas under the Park to be extracted.

Deer Lakes Park, one of nine in the Allegheny County parks system, covers 1,180 acres. According to news reports, the plan put forth by the County Executive would permit drilling on private property roughly one quarter of a mile outside of the Park to send horizontal arms stretching beneath Park property. These arms would tap into the Marcellus Shale formation approximately one mile below the surface. There will be no drilling rigs within the Park itself.

The financial details of the plan include a $3 million donation from the drilling firms to a parks improvement fund, $4.7 million in an upfront payment to the County and an 18 percent royalty payment on all gas extracted from beneath the Park for twenty years. Keep in mind that Pennsylvania law (Act 60 of 1979) sets the minimum royalty at 12.5 percent. Depending on the contract, it can reach as high as 20 percent (see *Policy Brief Volume 13, Number 27*), thus 18 percent is on the upper end of the range. While the upfront payments are self-explanatory, how much royalty money can the County expect? To answer this question, we can look to the experience of wells in the vicinity of the Park in Frazer Township.

Using production reports from the Pennsylvania Department of Environmental Protection (DEP) we will examine fourteen horizontal wells spud (drilled) in Frazer Township since 2011 (from the Yute, Schiller, and Bakerstown Road properties). Five wells actively produced for the entirety of 2012 and produced an average of over 1 million Mcf (thousand cubic feet) of gas from the Marcellus Shale formation. In 2013 that number swelled to fourteen with production averaging slightly below one million Mcf. Thus it is reasonable to assume that if the County were to allow a well to retrieve gas from under the Park, it would produce about 1 million Mcf annually (the production range of these fourteen wells in 2013 was approximately 500,000 to just over 2 million Mcf).

Royalties are paid on the basis of gas value which means the price of gas will be an important factor in determining the amount to be paid. The price most commonly used is the trading price on the New York Mercantile Exchange, also known as the Henry Hub price, usually specified at a particular day of the month. As outlined in Act 13 of 2012, this is also the price that sets the state imposed per well impact fee. In 2012 the average annual price was $2.7933. At this price, a well producing 1 million Mcf would bring in more than $2.79 million. A royalty payment of 18 percent would generate more than $500,000 for the recipient. In 2013 the average annual price increased to $3.749 meaning that the royalty payments would rise to about $675,000 annually per well assuming the same production volume. Of course this would be a gross payment as the gas companies are allowed to deduct transportation fees (post-production costs), but cannot deduct well fees, such as the impact fee, from royalties.

Newspaper reports indicate that the drillers could sink up to four wells into the Marcellus Shale formation under the Park. The implication is that the County could realize a gross of anywhere from $2 million to $2.7 million annually if the four wells each produce an average of 1 million Mcf and the price of natural gas ranges from $2.79 to $3.75. Obviously if production and price increase it could realize more in royalty payments—or less if prices and volume trend downward. Only if the wells are unable to produce a significant volume will the County fail to receive a sizable royalty payment. Reportedly, the County's lease would run twenty years. However, depending upon the size of the reserves under the Park, it could vary one way or another.

The upfront payments and royalties are of course the direct monetary benefits of entering into this lease. But the County would gain indirectly as well. As we outlined in a previous *Brief* (*Volume 14, Number 13*) the County and its municipalities will also gain through the impact fee collected under Act 13. Two provisions in the Act provide money to the County through the Marcellus Shale Legacy Fund, one of which allocates money to the Commonwealth's 67 counties based on population. In the first two years of the impact fee, Allegheny County received the second highest amount, over $1 million in each year. As more wells are spud and paying into the Fund, that amount may climb higher. Another section in the Act allocates money to the counties using a formula that uses the number of spud wells in a county as a percentage of total wells in the state. As more wells are spud in the County, this amount could increase. In 2011, with only nine spud wells, the County realized $79,000. In 2012 the number of spud wells rose to 22 and the County was awarded $145,000. Another four wells should raise this total further.

If Council and the Executive allow gas under Deer Lakes Park to be extracted there could be a substantial monetary gain to the County. Directly, the upfront payments of $4.7 million to the County and $3 million for Park improvements and the projected $2 to $2.7 million in annual royalty payments, along with the indirect payments via the impact fee, can be quite a financial boost to the County treasury.

Obviously the parks are an asset for County residents through their enhancement of the quality of living and they deserve to be protected. At the same time however, as long as the gas extraction can be done in a responsible and safe manner—and reports indicate that there will be strict environmental and safety rules in the lease proposal—taxpayers and residents should be able to benefit financially from them as well.

Frank Gamrat, Ph.D. Sr. 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