Experience in North Texas

The Barnett Shale play in northern Texas, around the Dallas/Fort Worth area, is very similar in geology to the Marcellus, making it a good indication of technological and industry needs. Since the development of the Barnett Shale started in earnest in 2001 there have been documented employment and income impacts.

In 2008, the Perryman Group, a Texas-based economic consulting group, conducted an economic impact study of activity in the Barnett Shale on Fort Worth and the surrounding area. At the time of the Perryman analysis, there were a total of 7,170 gas wells across the Barnett Shale region, 541 of them within the Fort Worth city limits. Their findings should help to illustrate potential impacts in Pennsylvania.

The analysis includes an industry-by-industry estimate for impacts on the gross product, permanent income and permanent jobs. The Perryman analysis is specific to the local economy surrounding Fort Worth, so the properties and numbers cannot be applied directly to Pennsylvania. Extrapolating to Pennsylvania is also particularly difficult because the oil and natural gas sector and supporting infrastructure is not as fully developed in some of the rural areas with the Marcellus Shale, therefore much of the economic activity, at least initially, will have to be conducted by firms and employees located outside of the region which will lessen the local economic impact. Yet the Perryman analysis does provide useful indications of the general impacts that could be expected and which Pennsylvania policy makers should consider.

Overall Economic Impact

Overall, the Perryman Group report estimates that Barnett Shale accounts for $8.2 billion in annual output (8.1% of total output in the regional economy), and 83,823 jobs (8.9% of total jobs). This is a significant number, particularly because the Barnett Shale region is predominantly an urban area, which already boasts a large and extensive economy. In addition, experts suggest that the stability of the natural gas economy has essentially shielded the region from economic downturns. Potential impacts in areas of Pennsylvania could be much higher on a percentage basis considering that the local economy is relatively smaller.

Where the Jobs and Income Are

As with most economic activity, the impacts of natural gas affect more than just the specific firms directly involved in the industry. There are also important employment and income effects on local businesses that supply the industry (such as oil field service companies, local contractors, area surveyors, attorneys, and local fuel and stone suppliers) and effects that result from employees spending their wages locally (local retailers and restaurants).

Leasing and royalty income, which is currently of much interest in Pennsylvania, actually accounts for a very small share of the economic impact. The Perryman report identifies three separate types of economic activities related to natural gas and outlines their share of economic activity, including:

(1) Exploration, drilling and operations (67% Gross Product, 62% Personal Income)
(2) Leasing and royalties that go to landowners (11% GP, 12%PI)
(3) Pipeline infrastructure (22%GP, 27% PI)

The employment impacts related to natural gas in the Perryman report show similar trends:

- \- Exploration, drilling, and operations (58% of new permanent jobs)
- \- Royalty and lease payments (14%)
- \- Pipeline infrastructure (2 8%)

As the industry expands within Pennsylvania more of these jobs and revenues should be reaching local residents, either as new hires or as the industry employees relocate to the region. Communities can increase the possible economic benefits of a growing natural gas industry by planning ahead to respond to the growing population within their areas.

Which Industries Benefit

As expected, the industrial sector with the largest gain from the Barnett Shale is the crude petroleum and natural gas industry, accounting for about one fifth (21 percent) of increases in personal income and 7 percent of new jobs. Retail trade accounts for about 16 percent of increased personal income and 27 percent of the new jobs, while new construction accounts for 10 percent of increased personal income and 9 percent of new jobs. Eating and drinking establishments similarly benefit accounting for 5 percent of personal income and 15 percent of new employment.

For any individual industry the difference between their impact on gross product and on employment partially reflects wages and salaries within that industry. Retail trade and dining establishments, for example, together account for 21 percent of new personal income but 42 percent of total new employment, reflecting that many such jobs are relatively low paying.