

*PQ: “We need to make sure our communities are better off than they were before the development occurred.”*

-Dr. Timothy Kelsey, Penn State Cooperative Extension

## Marcellus Economic Impact Studies Reveal Limited Scope

by Sue Smith-Heavenrich

*Broader View Weekly*, March 25, 2010

Most of the studies of the economic impact of Marcellus shale development consider only employment and income, says Dr. Timothy Kelsey. They usually do not look at the distribution of that money within the community. Kelsey, the State Program Leader in Economic and Community Development for Penn State Cooperative Extension, shared his analysis of economic impact studies during a webinar on Thursday, March 18.

Any analysis of Marcellus shale is an analysis of resource-based economic development, Kelsey explained. “When the gas is gone, it’s gone,” he said. “We need to make sure our communities are better off than they were before the development occurred.”

Most studies emphasize the importance of the “multiplier effect” in the local economy – dollars earned will generate more local wealth as they are spent. But, Kelsey emphasized, that is only true if those dollars are kept local.

Throughout his presentation, Kelsey emphasized that economic studies present only one piece of information. “And it’s not necessarily the most important or most definitive piece,” he said, listing the things most studies ignore: potential negative effects on other sectors of the economy; environmental costs and their implications; distribution of tax revenue; and the impact on local government services.

Municipal officials, Kelsey said, “must put economic studies into context with other issues.”

### **The Problem with Models**

A majority of the economic studies Kelsey has seen rely on IMPLAN modeling software. While it is relatively easy to use, the models are only as good as the data that gets plugged into them.

Part of the problem is that economists are using IMPLAN to create models of areas that lack a large manufacturing and industrial sector. “We need to already have a robust industrial relationship for the models to be accurate,” Kelsey said. Those relationships don’t exist yet in communities where Marcellus is being developed.

The other big question is what economic changes should be analyzed in the model. Adding a new shoe factory to an existing manufacturing sector is one thing, Kelsey said. The problem with modeling economic changes with Marcellus development is that people don’t know how many jobs will be created in which sectors. And, Kelsey added, if there is environmental damage we need to know specifically how much and what those costs will be.

“To do an economic study you need to know specifics,” Kelsey said. Right now we have anecdotes but we don’t have the hard facts and definitive information we need. Will the people working on the drill rigs spend their money in the community? Will they fill the motels and restaurants that used to be filled by tourists? If so, how does that affect other local businesses?

To date, economic models haven’t considered issues such as road maintenance costs. That’s because no one has plugged them into the model, Kelsey said. And if those costs are paid by taxpayers that will give you different results than if those costs are covered by the gas companies.

The same goes for public health costs. If industrial activities related to Marcellus development (such as compressor stations) create potential health impacts, the analysts have to plug those into the model. The problem is, Kelsey said, once you start including these, what else do you include?

### **Economic Impact of Marcellus**

In November 2008 the PA Economy League published a study on the economic impact of the oil and gas industry in PA. The study was funded by the Marcellus Shale Committee, an industry association, and used IMPLAN to model. Kelsey noted that they limited their focus to the current economic impact and showed that the industry contributed \$7.1 billion in economic output and provided 26,500 jobs.

Eight months later, in July 2009, the same industry association funded another study conducted by Considine et al. This study used IMPLAN to model impact of the gas industry on local economies, but it also includes future production estimates. Information for the economic analysis came from survey responses of seven firms (they accounted for 59 percent of all wells drilled the previous year). The model assumes that leasing and royalty income was spent in the year it was received, Kelsey noted. Later he pointed out that research on lottery winners shows that most people put a large chunk of this type of income into investments and spend it over time.

Kelsey had some criticism of the study. Future production estimates used a simplistic analysis, he said. The study posited that drilling activity is only affected by price, but the recent decline in gas prices shows that this is not true.

In May 2008 the Joint Urban Studies Center published a study based on case studies from the Barnett play in Texas and the Fayetteville play Arkansas. Their conclusions: landowners could receive more than \$1 million a year. But that figure assumes that landowners had 100 acres of land in a drilling unit, that they received 15 percent royalties, and that the price of gas was at least \$10/mcf (thousand cubic feet).

Broome County’s 2009 study was developed by plugging figures on drilling costs and expected revenues into IMPLAN software. The authors assumed that 15 percent of the revenues would be spent in the local economies, and then developed scenarios in which either 2,000 or 4,000 wells were drilled over the next decade. Given these assumptions, total economic activity for the county could reach anywhere from \$7 billion to \$15 billion with up to 1620 jobs created just during the drilling.

An economic impact study may help municipalities identify potential financial gains from natural gas development. But, Kelsey noted repeatedly, because of their limitations economic studies cannot be the only thing that communities take into account when considering the economic impacts of Marcellus development.

**Sidebar:**

**Read the Studies**

- Kelsey's talk, "The Impact of Marcellus Shale: What Do the Economic Impact Studies Imply?" is archived online at <http://naturalgas.extension.psu.edu/webinars.htm>
- Economic Impact of Oil & Gas Industry in PA (Nov 2008) at <http://allegHENYconference.org/PEL/PDFs/EconomicImpactOilGasInPA1108.pdf>
- An Emerging Giant: Prospects and Economic Impacts (July 2009) <http://www.pamarcellus.com/EconomicImpactsofDevelopingMarcellus.pdf>
- Studies by the Joint Urban Studies Center (May 2008) <http://www.urbanstudies.org/marcellus/default.shtml#>
- Broome County Study (Sept 2009) [http://www.gobroomecounty.com/files/countyexec/Natural%20Marcellus-Broome\\_County\\_7\\_10\\_09%5B1%5D.pdf](http://www.gobroomecounty.com/files/countyexec/Natural%20Marcellus-Broome_County_7_10_09%5B1%5D.pdf)