

Marcellus Shale: Asking Tough Questions of the Oil and Gas Companies:

Employment Benefits: What's up with job creation studies?

In a depressed economy, trumpeted promises of jobs and economic benefits of Marcellus Shale drilling are unbeatable as a way of defusing critical review of a proposed exploitation of a resource. Urgent concerns about individual, environmental, and community health take a back seat to industry hype about an economic boom.

The truth about job creation studies

The following three studies are quoted repeatedly by gas industry spokespersons and other supporters of hydrofracturing.

The Three Major Studies are:

1. *An Emerging Giant: Prospects and Economic Impacts of Developing the Marcellus Shale Natural Gas Play.* July, 2009. Timothy Considine, Ph.D., M.B.A., Robert Watson, Ph.D., P.E. Rebecca Entler, Jeffrey Sparks
<http://www.alleghenyconference.org/PDFs/PELMisc/PSUStudyMarcellusShale072409.pdf>

The Economic Impacts of the Pennsylvania Marcellus Shale Natural Gas Play: An Update published May, 2010 Timothy J. Considine, Ph.D., Robert Watson, Ph.D., P.E. Seth Blumsack, Ph.D. <http://marcelluscoalition.org/wp-content/uploads/2010/05/PA-Marcellus-Updated-Economic-Impacts-5.24.10.3.pdf>

Together these are referred to as “The Penn State Studies”.

2. “The Economic Impacts of the Marcellus Shale: Implications for New York, Pennsylvania and West Virginia.” Timothy Considine, Ph. D., president of Natural Resource Economics of Laramie, Wyo., 2010,
<http://www.api.org/policy/exploration/hydraulicfracturing/upload/API%20Economic%20Impacts%20Marcellus%20Shale.pdf>

3. Pennsylvania Economy League of Southwestern Pennsylvania, LLC, *Economic Impact of the Oil and Gas Industry in Pennsylvania*, November 2008
<http://alleghenyconference.org/PEL/PDFs/EconomicImpactOilGasInPA1108.pdf>

Significant questions have been raised about the corporate biases and the quality of the projections of these studies.

First, the biases:

1. **The “Penn State Studies”**, carrying the imprimatur of a university, *were funded by* a major gas industry trade group, the Marcellus Shale Coalition. This was not disclosed by the author, Tim Considine, for the first study. The second study included a disclaimer, but both studies carried the Penn State insignia and other references to Penn State University. Mr.

Considine left Penn State prior to completion of the first study to work for a consultant group providing services to the oil and gas industry.

From the Responsible Drilling Alliance's open letter to the Pennsylvania State University president

"On two separate occasions, the Pennsylvania Budget and Policy Center counseled law makers to disregard the conclusions of these two "Penn State studies" because of their funding and bias. The Pennsylvania Department of Labor and Industry produced a parallel study on employment, Marcellus Shale Industry Overview which estimated only a small fraction of the touted jobs.

Neither Pennsylvania College of Technology's Marcellus Shale Workforce Needs Assessment nor Penn State Cooperative Extension's Potential Economic Impacts of Marcellus Shale in Pennsylvania supports the exaggerated claims of these two industry funded papers."

Below are links to the full exchange between the Responsible Drilling Alliance and Penn State regarding a request to Penn State to disassociate itself from the studies.

Letter from the Responsible Drilling Alliance to Penn State President Spanier
<http://www.northcentralpa.com/sites/default/files/openletter.pdf>

Dean Easterling response on behalf of Pres. Spanier
<http://www.northcentralpa.com/sites/default/files/Easterling-RDAletter.pdf>

Follow-up letter to Dean Easterling from Responsible Drilling Alliance
<http://www.northcentralpa.com/sites/default/files/DeanEasterling.pdf>

From Jon Bogle of the Responsible Drilling Alliance, "Penn State took the position that the author's opinions were shielded by academic freedom. The paper's overstatements, and its misuse of statistics, I believe, reach beyond opinion to the level of dishonesty. The Penn State Report, as the industry has dubbed it, is the big lie that has put Pennsylvania citizens at a disadvantage when negotiating their future with this new industry."
<http://www.responsibledrillingalliance.org/news/economics/brokenpromises.html>

2. The 2010 "Economic Impacts" study by Timothy Considine was paid for by the American Petroleum Institute. Mr. Considine, the lead author of the previous "Penn State studies", authored this while employed by a Wyoming consulting firm that does work for the industry. (Post-gazette.com July 23rd, 2010)

3. The Economy League study does not suffer from the blatant bias of the two other studies, but this study also was prepared for the Marcellus Shale Committee. In its own words, the study's "input/output analyses *were supplemented by discussions with experts in the Oil and Gas industry.*" (From Pennsylvania Economy League of Southwestern Pennsylvania, LLC, Economic Impact of the Oil and Gas Industry in Pennsylvania, November 2008)

Next: Problems with the Methodology:

This next section gets a little academic sounding, but stay with this because this is important to understanding how all the big numbers are generated.

All three of these studies use an input/output model for data analyses based the Minnesota Implan model. This is an accepted approach for jobs and income projections in many industries, but problems occur in the Marcellus studies.

Input/Output analyses for larger regional analyses are based on estimates, using national and state data bases, rather than the more common survey data. Also, input/output projections usually do not include potential negative effects on other sectors of the economy-both public and private. According to experts, this approach has the potential to produce exceedingly inflated projections of outcomes.

“Commercially available input-output economic models are usually predicated on a national-average flow of goods and services within local industries, but do not account for the far-flung workforces and supply chains used by the natural gas industry. Additionally, many of the industries that participate in the development of a natural gas field are usually not present in the area before the natural gas development process begins, thus capturing their workforce needs using most workforce projection models is ineffective at best given there is no local baseline data to provide a starting point.”

<http://www.msetc.org/docs/NeedsAssessmentwithcover.pdf>

This quote refers to New York but the implications for PA are the same:

“Many of the studies of the economic impact of gas drilling have been based on input/output (Implan) analysis. Input-output analysis relies on tables of coefficients that link one industry to all other industries. In a region where gas drilling has not existed in the past, it is impossible to know what those inter-industry coefficients will be, and “borrowing” them from other regions or industries is likely to result in highly inaccurate impact conclusions.

(from: “Unanswered Questions About The Economic Impact of Gas Drilling In the Marcellus Shale: Don’t Jump to Conclusions” March 27, 2010 Prepared by: Jannette M. Barth, Ph.D. JM Barth & Associates, Inc.)

<http://occainfo.org/documents/Economicpaper.pdf>

“(Penn state economist Timothy) Kelsey calls these projections “optimistic,” adding that the industry’s projections are based on fairly simple economic models that can predict small changes in stable communities, but not the significant changes Marcellus drilling will bring. “Economists have been AWOL on this,” he said.”

<http://voicesweb.org/archive/10apr/10apr-politics-economics.pdf>

Unrealistic Hiring Expectations

Community colleges and other educational institutions-including Penn State-are getting millions of dollars in grants from the Dept. of Labor to train people for work in the gas industry. The money is great for community colleges and universities, but this is public money, not an industry investment, and it is only a hope that it results in employment. Unfortunately, these grants are often reported as if they were synonymous with people being hired.

Most of the job descriptions require oil and gas industry experience. The want ads say this. Industry reps acknowledge that this is critical. Job Training specialists also acknowledge that it will take several years before there is a trained local workforce.

<http://www.msetc.org/docs/NeedsAssessmentwithcover.pdf>

An industry with millions of dollars of equipment, and a high-risk work place, cannot take a chance on recently trained but less experienced people when they can get plenty of experienced people to travel from site to site. Assuming someone obtains the necessary training and experience, do they then need to travel, spending weeks/months on the road to keep one of the full time jobs?

A Penn College study includes the statement that a single well requires the efforts of 410 individuals working in 150 different occupations. While the study provides a breakdown of workforce needs by time frame and permanence, industry people refer only to the 410 and 150 numbers, conveying the impression of a much larger on-going workforce.

“It is important to note that more than 98% of these jobs are required only while wells are being drilled. In addition, since the workplace location and residency of these workers will depend on a multitude of factors and will likely change over time, it is impossible to predict the impact of workforce needs for any one specific location.” Marcellus Shale Education and Training Center: Marcellus Shale Workforce Needs Assessment June, 2009
<http://www.msetc.org/docs/NeedsAssessmentwithcover.pdf>

Follow-up questions of industry representatives could elicit a more complete response.

When an industry rep says “Over 44,000 were created in 2009”. Ask them

- What is your documentation for the existence of those jobs?
- Are you referring to jobs that you *know* were created or are you referring only to predictions
- I understand that predictions are based on what numbers you put into the formula. Could you explain that for me?

Note: Three union representatives have testified recently that they are not seeing these jobs in their unions. (Sen. Ferlo Town Hall Meeting panel-Sept. 9th; Rachel Carson Legacy Conference panel-Sept. 24th; County Council Public Meeting Panel-July 21st.)

When a company spokesperson says “my company plans to double the work force in Pennsylvania”, ask:

- How many people in your current work force in Pa are legal residents of Pa?
- What is your time frame for doubling your work force in PA?

When a company rep speaks of the companies “intentions” to hire Pennsylvanians. Ask them:

- Are you having any difficulty filling those jobs with Pa. residents? If so, why?
- How do you plan to address the problem that Pa workers don’t have the oil and gas industry experience?

When an industry rep quotes Dept of Labor data showing an increase in new jobs in Pa, ask:

- Are these full time or part?
- Are they filled by people from PA?
- Are they permanent or temporary?

The answers to these questions will not be at the tip of the tongue of the industry representative, but a fumbling answer says a lot.

A **Tom Ridge** interview is an example of follow-up questions never asked:

Ridge: "I was on a site today that 80 or 90 folks working that at that site, and about 80 percent of them were local residents from Pennsylvania. Of course, the economic sustainability is real. They call it the 'Marcellus Multiplier.'" " From Pgh Business Times

The follow-up that didn't happen: "I am curious, Mr. Ridge, How did you come to find out that 80% were 'from PA'? Are they long time residents or people new to PA? Are they new hires or people who already worked for sub-contractors?"

Benefits to the Community: Why this is not what it seems

The Terminology:

The industry uses three terms: *direct, indirect and induced*. Indirect and induced refer to spending by employees of the drilling industry and spending, including hiring, by other businesses, as well as spending by employees of those other industries.

As with job creation, the industry implies that any increase in indirect and induced spending in a community will be on-going. But much of the activity is at the drilling (short term) phase, as distinct from the production phase. Increased spending in area stores and increased sub-contracting from area industry related firms, as well as increased housing rentals and sale prices, might be substantial at first but not long lasting.

In addition to the fact that most increases in employment are not long lasting, according to one source, "Retail trade, and eating and drinking 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."

<http://naturalgaslease.pbworks.com/f/Potential+Economic+Impacts+of+Marcellus+Shale.pdf>

Uneven Benefits/Uneven Costs:

While some business do better for a while, the whole community pays for damage to roads and bridges, for increased use of emergency rooms and mental health services, for increased drain on police and fire department resources, for increases in problem behavior, as hundreds of out of state workers move in, and in the higher prices for basic goods that local stores charge.

Other businesses, dependent on quiet and idyllic scenery for tourism, hunting and fishing, and other forms of recreation, lose business.

“Tourism is the second most lucrative industry in Pennsylvania. Small towns attract visitors to festivals and charming main streets. Hiking, biking, canoeing, camping and bird watching draw visitors to nearby state forests. Hunting and fishing are not only major tourist economies in these communities but provide subsistence food for many locals. And agriculture, from corn to maple syrup and cheese, provides employment to one in five Pennsylvanians. (Marcellus drilling transforms the state by Hannah Abelbeck) <http://voicesweb.org/archive/10apr/10apr-politics-economics.pdf>

Not only are benefits to businesses unevenly distributed, some individuals suffer more than others. Some people experience a variety of illnesses, some quite serious and often affecting children as well as adults, from contamination of their water, from serious air quality problems, from the pounding and the noise of the rigs near their homes causing both physical problems and contributing to anxiety and depression. Many living near drilling sites find their property values greatly reduced, not necessarily due to leasing of their own property. All residents pay higher prices for basic goods and services as the population swells with out of state workers having money to spend. For lower income people in the community, those also least likely to be the recipient of new jobs, this is a double negative impact.

“Residents who are on a fixed income can be especially impacted as property taxes rise...Common assumptions hold that elderly persons are often the most at risk as they face a double impact of largely fixed income among high inflation as well as more ridged resistance to social changes in the community.” <http://nercrd.psu.edu/Publications/rdppapers/rdp43.pdf>

Dr. Tony Ingraffea from Cornell University presents another basis for thinking about economic impact in his shale presentation video to NY groups this past spring ... basically what he said is that certainly there is money to be made from deep shale drilling. He estimated only about 2% of NY's population of 20 million people, landowners who lease their land for gas development, would benefit from the gas extraction, but this will cost the remaining 98% of the population a lot more than they will make and for a lot longer period of time. <http://un-naturalgas.org/weblog/2010/04/tony-ingraffea-drill-here-drill-now-screws-the-grandkids-three-part-video-presentation>

“The bust is a tremendously important factor of energy development, especially in the context of boomtown communities. Almost all of the boomtown communities that were researched during the 1970s and early 1980s went through a severe economic downturn as the construction or development phase of the industrialization process was completed and entered into a much less labor intensive phase of energy production...”(Energy Boomtowns & Natural Gas: Implications for Marcellus Shale Local Governments & Rural Communities; January 2009, by Jeffrey Jacquet) <http://nercrd.psu.edu/Publications/rdppapers/rdp43.pdf>

Additional useful sources:

Natural Gas Drilling Will Not Affect Everyone Equally: Marcellus Accountability Project. <http://www.tcgasmap.org/media/Economic%20and%20Social%20Costs%20of%20Gas%20Drilling.pdf>

Tabulating True Costs of Gas Drilling <http://www.tompkinshosting.com/tompkinsweekly/TompkinsWeekly100412.pdf>