Jobs and Community Benefits: Deconstructing Gas Industry "Messaging"
Claudia Detwiler, 2011

In a depressed economy, promises of jobs and economic benefits are unbeatable as a way to defuse critical review of exploitation of a resource. The gas drilling industry has counted on these carefully constructed messages of abundance to discourage serious conversation about the damage to individual, environmental, and community health.

These messages are highly deceptive. Their purpose is to make people feel they have to choose between financial security and protecting the environment and their health. It is a harmful set-up and a false one.

Our task is to unmask these deceptive messages so that we can have the conversation that the industry does not want us to have.

This paper references a growing body of data that challenge and replace messages of the drilling industry with vastly different understandings.

Although this paper does not address the damage of the drilling cycle to human health, much information can be found on this by reviewing web sites at the end of this paper.

Endnotes and additional references are provided to support this content. Topics in this paper are:

- Some Research History
- Job Creation by the Numbers
- Manufactured Jobs for Pennsylvanians
- "Rights", Property Values, Nervous Bankers and Insurance Agents
- Eminent Domain: A Threat to a Town's Tax Base
- The View From the West
- Impact on Local Business: Not Everyone is a Winner
- Tax Benefits: For Whom?

I. Some Research History

It had appeared that the shameful practice of hiding industry distorted research behind an academic façade had ended with the "Penn State Studies" of 2009 and 2010. A new study in July 2011 revived this practice.

These studies, purchased by the Marcellus Shale Committee, an industry trade group, were the source of those astounding projections of tens and hundreds of thousands of new jobs to result from horizontal hydrofracking. They successfully got the attention of the news media and of politicians dependent on the oil and gas industry.

The lead researcher (Timothy Considine) was working in Wyoming as a consultant for the industry before the first of the 3 was even published. Mr. Considine, in his position with the oil and gas consulting firm, authored a follow-up study, this time paid for by the American Petroleum Institute[1].

When an industry purchases research, the concern is potential distortion of the findings. Serious problems were in fact identified in the studies' job projections by a number of researchers, one of whom is Penn State economist Timothy Kelsey.

Where the Research Goes Wrong

Mr. Kelsey states that the fairly simple input/output economic analysis of these studies is "OK for marginal changes-small changes-a subtle shift, not significant changes. With Marcellus we are not looking at those kinds of marginal, small changes in a community."

He pointed out that economic impact analysis is also not the same as cost benefit analysis, which looks at whether there is a net gain or loss based on a much broader picture of impacts[2].

The Responsible Drilling Alliance more forcefully stated: "The paper's over-statements, and its misuse of statistics…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[3]"

Other researchers have faulted the studies for their irregular assumptions about expenditure patterns and time frames for royalty payments and signing bonuses, which greatly inflated the projected impact.

In spite of the fact that studies from other departments within Penn State, other private researchers - and the Dept of labor and Industry's own data - support only a fraction of these numbers, the drilling industry continues to publicize the astounding projections from these two "studies"[4].

The industry knows that if you repeat a story line often enough, even skeptical people accept it by the power of repetition. Even people having reservations about the numbers will feel compelled to make reference to "all of those jobs".

(For a comprehensive review of limitations of the Implan Input/Output model as applied in the "Penn state" studies, please see "Additional References" 1, 2 and 3 below, preceding the Endnotes).

Yes, some people do get jobs….for a while. The pipeline industry might be stronger…for a while. Yes, stores and hotels are busy….for a while. But none of this, even at its peak – which is very temporary – is remotely close to those numbers. And if you look at the same region or community two or three years later, those jobs are gone and, worse, the area has regional destruction and is burdened by additional costs incurred during the boom time….*and some people have suffered mightily from diseases and loss of their way of life for that temporary boost.*

Projections Become Facts:

One industry practice is to simply drop reference to "projected" jobs. Projections quietly become facts. - with no supporting data and no requests for back-up information by news media.

The original report promised 107,000 new jobs in Pennsylvania by 2010. An "Up Date" released May 2010 scaled that promise back to 88,000 new jobs, presumably on top of the 44,000 supposedly created in 2009.

"During 2009, the Marcellus gas industry … created more than 44,000 jobs." They simply lifted a projection, already highly disputed, and made it a fact…and no one blinked[5].

"Penn State Study" No. Three

In July, 2011, the Marcellus Shale Coalition released its latest purchased study from Penn State. Instead of predicting jobs, this study declares that the Marcellus industry "has supported" 140,000 jobs[6].

The PA Budget and Policy Center noted: "The study overstates the number of jobs supported by the industry. It states that 140,000 jobs are supported by the industry, but jobs data from the state Department of Labor and Industry show that less than 19,000 people were employed directly in core Marcellus Shale industries at the end of 2010[7].

The origin of the 140,000 number is the result of the same methodology discredited by research experts in studies one and two.

II. Job Creation by the Numbers

Coincidentally, the almost identical number of 141,000 jobs appeared at the same time in a Marcellus Shale Coalition press release[8].

Unpacking this number is quite revealing.

<u>Step One:</u>

A helpful Dept of Labor and Industry report to the Governor's Marcellus Shale Advisory Commission defined *27 statewide industries* as "Marcellus Shale Industries", in spite of the fact that these industries produced goods and services long before the advent of Marcellus drilling[9].

These industries were grouped as "Marcellus Industries" based on their industry **(NAICS)** classification alone. These 27 industries already existed and were providing employment in PA before drilling, but Marcellus drilling is given credit for *all* of the employment of *all 27* industries –- based only on a classification.

Step Two:

Labor and Industry then issued a summary report called "Marcellus Shale Fast Facts"[10].

> "… "Marcellus Shale Fast Facts" is designed to deceive by giving the illusion that the Marcellus gas industry has produced several times more jobs than L&I's own statistics indicate…This quoted figure of 141,000 is a composite of the employment in the core drilling and pipeline industries and ancillary industries (the 27 total industries)… These are statewide figures and only a small number of the employees in these industries are engaged in Marcellus shale work[11]."
>
> (Note: The June 2011 Labor and Industry "Fast Fact" adds federal, state and local public agencies to the count of "Marcellus Ancillary" industries quoted above, now bringing "Marcellus Industries" employment to 218,000. This is based on the reasoning that these public agencies do some work pertaining to Marcellus drilling).

Step Three:

> The Marcellus Shale Coalition issues its press release based on the "Fast Facts", The press release is boldly titled: By The Numbers: The Mighty Marcellus Continues to Fuel Job Creation (May 31, 2011) announcing the creation by "Marcellus Industries" of 141,000 jobs.
>
> In very small print, the L and I "Fast Facts" includes this modest disclaimer: "While the vast majority of Marcellus Shale related employment can be found in these industries, not all establishments in these industries are involved in Marcellus Shale."

The MSC omits the disclaimer.

This report was a pure gift to the industry by the state of PA for the industry's use in press releases – and they did..

More Creative Data from the Dept of Labor and Industry.

Based on the same Dept of Labor report, the Marcellus Shale Coalition's "Might Marcellus" press release announced six additional "statistics". Two, "deconstructed" below, illustrate the skillful manipulation of numbers used to convince Pennsylvanians of the "benefits" of drilling.

- *"48,000 New Marcellus Hires" (June report increases this to 72,000):*

As with the 141,000 number discussed above, *all hiring in 27 statewide industries* is counted as resulting from Marcellus activity.

And an additional deception is introduced:

"New hires are not the same as jobs created because many new hires replace workers who have quit, been fired or retired. Over the same period that Marcellus industries reported 48,000 new hires, there were 2.8 million "new hires" in all Pennsylvania industries but only 85,467 jobs were created. .. about 3% as many jobs as the number of new hires and these were not necessarily in Marcellus Industry work.

In fact, Marcellus Core industries in Pennsylvania created 9,288 actual jobs …but Marcellus Ancillary industries actually lost 3,619 jobs in this period so that, taken together, Marcellus Core and Ancillary industries only created 5,669 jobs" … a very different message than "44,000 new hires[12].

- *"1300% Employment Increase in the N. Tier"*

The MSC states that "Northern Tier saw an increase of 1,109 employees from 2008 Q1 to 2010 Q3, for an increase of nearly 1300%" – a very impressive number. The MSC omits explaining that the 1300% increase is employment for core industries only – those related to actual drilling activity and worked largely by people moving into the area from Western states.

Since the drilling industry was ramping up from 2008 to 2010 in the Northern Tier, rapid increase in this particular employment group says nothing about the impact on employment for people living in that area.

III. Manufactured Jobs For Pennsylvanians

Industry people cite a study showing that "410 individuals and 150 occupations are needed to drill a single well". Because most people hear "drilling" meaning the entire process, repetition of this number implies abundant employment[13].

To bolster this perception, press releases quote interviews with recent graduates from the new – publicly funded – training programs saying how happy they are that they will be working for an industry "that will be here for 40 or 50 years".

They don't report that 98% of those 150 drilling related occupations represent specific tasks that are required only for the short drilling and fracking phase, a few months to a couple of years, depending on the number of wells per pad or in the immediate region - or that the vast majority of those 410 individuals are required for only a few hours or days for each well, and these are people who already had their jobs.[14].

They also don't mention that most full time workers among the 410 individuals are the out of state workers who travel with the industry.

The 410 individual becomes the basis for another industry number deception…that the industry "supported" 15,000 - **1**7,000 direct jobs from well site development. But there are not 15,000 - 17,000 actual jobs. They simply took the hours worked by those same 410 individuals – full and part time, local and out of state - and created a full time equivalent number. 17,000 FTEs (full time equivalents) is not at all the same as “17,000 direct jobs”. This number represents a very short term, highly labor - intensive stage of well development involving fractions – some very small – of already employed workers within the drilling industry and sub-contracted for brief periods and specific tasks from other industries.

“Consequently, the energy companies and contractors that perform drilling tasks are typically not local operations, but rather are national or international in scale and scope, and utilize personnel from around the country and around the world to perform these processes.[15]”

An industry with millions of dollars of equipment and a high-risk work place is not going to hire inexperienced local people when they can get plenty of experienced people who travel with them.

To bolster the claim that they are hiring Pennsylvanians, the MSC cites an internal survey, not made public, that 70% of the “new hires” (very different from “new jobs”) are filled by Pennsylvanians. (Mighty Marcellus)

The Labor and Industry report states that 71% of the “new hires” (again, not jobs) in the Core and Ancillary Industries were filled by Pennsylvanians. As before, the 71% is for all *employment activity in 27 statewide industries,* whether or not the “new hires” had anything to do with drilling[16].

Where Pennsylvanians do see an increase in local employment is in the relatively low paying sales clerk and service industry jobs-wait staff, hotel housekeeping staff.

These increases, too, are short term. Once the drilling and fracking has occurred and the well is in production mode, industry workers move on. Increased spending in local and regional stores, hotels, and businesses is largely over.

IV: “Rights”, Property Values, Nervous Bankers and Insurance Agents

While the gas industry assures us that there is nothing to worry about, the banking and insurance industries, as well as a growing number of law firms, do believe there is a lot to worry about.

When is a Right Not a Right?

Lawyers are challenging industry messages regarding both “rights” and risks.

No landowner has a “right” to harm their neighbor or community. This is not only an ethical statement, it is accepted in ordinances and laws we all live by daily. It is becoming a fact for people leasing in the drilling industry.

Harm to neighbors can take many forms. Some people experience a variety of illnesses from contamination of water and from air pollution. These illnesses, sometimes affecting children even more than adults, range from debilitating headaches, nosebleeds and rashes to cancer, neurological disease, and endocrine diseases, as well as depression and anxiety disorders from the constant, overwhelming noise of compressors and other equipment.

Increasing numbers of communities are addressing these concerns by limiting or banning drilling to protect the health of their communities, an issue the industry views as denying people their property “rights”. (Note: Act 13, passed by the PA legislature in February, 2012, has made illegal bans and all other forms of zoning or regulation to protect communities previously passed by municipalities).

“As the public sentiment grows for a ban on High Volume Hydrofracking (HVHF), lawyers and others who speak for corporate profit-making opportunities in natural gas say that laws banning or limiting gas drilling is a “taking” of property. Even some who seem to be on our side make the same claim. This claim is groundless and misguided. It is a scare tactic to prevent public pressure on our elected officials against HVHF[17].”

Law firms are also weighing in on representing people made ill by gas drilling.

From one law firm: “These chemicals can cause both acute and chronic respiratory illnesses, including asthma, bronchitis, emphysema pneumonia, and pulmonary edema. They can also affect mental functioning, contribute to neurological disorders, high blood pressure and heart disease.[18]”

Declining Property Values and Mortgage Violations

The promise of big money in bonus and royalty payments is very compelling, especially in hard times. And for some it might work out well. But for many people the windfall turns into a disaster.

Here’s is the other story: When you lease property for drilling, you have seriously violated the terms of your mortgage, your mortgage insurance, and any other property insurance. You have turned your property into a potential industrial site.

You could be asked by the bank to pay off your mortgage. The company holding the insurance on your property also now considers your property a potential industrial site, not a home or farm, and the insurance goes up by tens of thousands of dollars.

This is real and it is happening. The banks and insurance companies are not about to be on the hook for the damage of drilling.

Banks and mortgage companies increasingly won’t make loans, and insurers won’t insure properties, even near a leased property**.** It will happen more and more when the industry ramps up.

Pennsylvania has its first known denial of a mortgage application as a result of the property being *near* a drilling site, explained in this statement by Quicken Loans: “In some cases conditions exist, such as gas wells and other structures in nearby lots, that can significantly degrade a property's value. In these cases, we are unable to extend financing due to the unknown future marketability of the property." [19]

Lease holders increasingly are finding that they have not made the sound financial decision they had expected when they cannot sell their land, borrow money for repairs or expansions, or get insurance policies renewed. Appraisers are lowering valuation of properties with, and near, drilling. Banks are increasingly setting standards denying mortgages and loans to property with, and near, drilling sites. Insurance companies are setting tough standards for defining risk on properties with, and surrounding, drilling

This is not the story the industry likes to tell.

"Decatur resident Tim Ruggiero sued Aruba Petroleum after the company drilled on his 10-acre property and spewed so many toxins that Ruggiero says it made family members sick and reduced their property's value from $300,000 to $78,000.

When Ruggiero sued for damages, the gas company attorney argued that the property should never have been valued at $300,000. His reasoning: The land should have been valued at $78,000, because the owner didn't own the mineral rights and the land was therefore vulnerable to drilling.

... If that's the case, he (Ruggiero) said, then tax appraisals should have to reflect the fact that some properties can be quickly and vastly diminished in value if drillers come along and start releasing toxins underground, onto the surface, and into the air.[20]"

Referring to the Ruggiero's home: "I wouldn't sell it for $78,000," said Patsy Slimp, a board member and former real estate agent. "I could not sell this house in a clear conscience.[21]"

From Fort Worth:

"Many homeowners feel betrayed by real estate developers and salespeople who they believe knew about planned gas wells and didn't tell them, or who now tell them their homes have lost value. They see the value of their biggest investment, in some cases the place they had planned on living the rest of their lives, threatened, as well as their own safety and peace of mind.[22]"

From New York:

"In Otsego County, with its pockets of affluence, the pace of drilling has been far slower and the prospect of drilling is depressing land values in the Cooperstown area, according to Glenn Hubbell, who operates Hubbell's Real Estate.

With thousands of acres in the county under lease, land shoppers are checking the county's website, where leases are listed. They want to avoid leased areas, drilling rigs operating around the clock, water trucks clogging up the roads and environmental risks, he said.[23]"

In PA, residents in Clearville, near the Maryland border, worry about the implications of their health problems related to near-by drilling and their ability to sell their homes[24].

Note: Property assessments might increase in an area while residents in the same area receive drastic reductions in property appraisals. Assessments, done infrequently in many areas, generally do not reflect location of drilling sites or illnesses experienced by people living near drilling, while appraisals do.

Also, property values might rise in higher income neighborhoods removed from the actual drilling, Community leadership will need to decide how many people they will allow to be harmed in order to have increased – and possibly short term – property values in some areas.

The Banking and Housing Industry Weighs In:

The following article summary is from a banking executive in New York[25].

Quoting from the article's summary:

- There is not a cost effective or reliable way to determine if a residential property has a gas lease to allow an Appraiser to establish an appraised value.
- Surface or sub surface rights within 200 feet of a residential structure would not be acceptable for conventional financing in the Secondary market.
- NYS title insurance gas endorsements specifically void title insurance coverage if the premises are used for any commercial venture.
- Lenders are responsible to warrant several items to the investor in the Secondary market that cannot be done leaving lenders with significant liability.
- NYS licensed Appraisers are not able to consider the impact on value if a gas lease exists as noted it item #1 above and hence their Appraisals would not meet Secondary market requirements.
- Surface or sub surface rights within 300 feet of a residential structure OR within 300 feet of property boundary lines would not be acceptable for FHA (Department of HUD) financing.

Citing a PA mortgage services company presentation: "If local banks do not require that leases comport with mortgage rules, Fannie Mae and Freddie Mac may stop buying mortgages from these banks, Mr. Manzo said. Other experts warned that the two institutions, or investors who bought mortgage-backed securities, may also force local lenders to buy back noncompliant mortgages. [26]

The Department of Agriculture is considering requiring an extensive environmental review before issuing mortgages to people who have leased their land for oil and gas drilling due to concerns about being out of compliance with the National Environmental Policy Act, known as NEPA.
Home mortgages and rural business loans from the agency will be affected by this and, if implemented, this policy will have implications for all other federal agencies issuing mortgages or loan guarantees, such as the FHA, Veterans Administration, Freddie Mac and Fannie Mae. [27]

The North Carolina Department of Justice has delivered a written (draft) report to the state legislature on risks to homeowners. [28]

As summarized by the Associated Press:

- *...landowners should be extremely careful when considering ceding drilling rights and legislators should require more information and protections for residents .*
- *...the act of leasing without the lender's prior approval could place the mortgage in default.... Storing "hazardous substances" on the site of the mortgaged land also could be grounds for a breach of contract.*
- *At least two lenders have said they won't make loans for homes where the borrower doesn't own mineral rights or has leased them.*

The PA real estate sellers disclosure statement for a major western Pennsylvania multi list has been updated to include, under "problems and issues", disclosure of a lease of the oil, gas or mineral rights on the property itself, disclosure of past drilling on the property or future drilling and the requirement for disclosure of any past or planned drilling of "near - by" properties.

The Insurance Industry Weighs In:

One Insurance Industry consultant included the following topics, among others, in its seminar[29]:

"Hdrofracking Types of Risks":

Property Damage (devaluation)
Migration of gas and hydrofracking chemicals to the surface
Impacts on Rock Shelf Causing Seismic Events, surface subsidence
Pressure explosions,
Loss of land value/enjoyment,
Contamination/loss of crops or livestock.

Another insurance staff training workshop provides a different perspective[30]:

> "Consumers who allow drilling on their property are subject to first-party exposures such as contamination, crop damage and bodily injury, and third party exposures including damage to neighboring properties, nuisance suits by neighbor and injuries to invitees or licensees, according to Joel Hopkins, lawyer for Harrisburg, Pa based Saul Ewing…"

> The reporter's summary continues, explaining that despite an insurance industry act "which limits an insurer's ability to rescind certain property policies, an insurer may cancel or discontinue a policy if…there was an increase in risk after the policy was issued. Some carriers have started canceling policies for increasing hazard…"

As with well leasing or construction, pipelines and their related compressor stations can reduce the property value of houses and farms and homeowner insurance companies might not insure, or not cover losses or damage to, a property that has a pipeline on it, under it, or on an adjacent property. Many banks and mortgage companies will not approve a mortgage on a property with a pipeline, or that is subject to eminent domain status. Some are even calling in debt, forcing people off their properties.

V: Eminent Domain: A Threat to a Town's Tax Base

A drilling industry impact of concern to both individuals and entire communities is the growing aggressiveness of drilling related industries to seek utility status and eminent domain privileges.

"There is another battle brewing over the development of the Marcellus Shale—pipeline construction and eminent domain (as) some pipeline companies are applying for utility status in Pennsylvania in order to acquire more expansive eminent domain powers. Other pipeline companies worry this will open a floodgate of regulations from the PUC[31]."

"The state Public Utility Commission intends to declare natural gas pipeline company Laser Northeast Gathering a public utility, giving it the power to condemn private property by eminent domain.… Commissioner James Cawley warned of 'grave implications for individual Pennsylvanians and their communities.' …Collection and gathering pipelines will directly impact more property owners than the gas wells expected to multiply over the next several decades tapping Marcellus Shale gas…Judge Colwell argued a pipeline collection and gathering system did not serve the 'public', but rather natural gas well owners[32]. "

(Update: Laser withdrew its application but two other pipeline companies, Peregrine and Pentex – both from Texas – have made similar applications for public utility status. Their applications are pending. Peregrine, which has public utility status in Texas, is proposing a $16 million, 9 mile pipeline project in Fayette, Greene and Washington counties and has applied to the state in 2010 to become a public utility, which would give it the quasi-governmental power to traverse private properties through eminent domain. Pentex is seeking PUC permission to transport gas from new shale wells in seven Bradford County communities.

Although eminent domain status requires a court hearing to determine a fair price for the condemned property, landowners will be in a weakened position to negotiate and will no longer have the final say regarding placement of a pipeline on their land, when the gathering companies hold the ultimate eminent domain power. The terms for granting public utility status are very broad and rely primarily on the word of the company that it will adhere to the requirements for serving the public that are included in the status.

35 members of the PA General Assembly have written to the Federal Energy Regulatory Commission expressing concern about the application of the Central New York Oil and Gas Company for a Certificate of Public Convenience and Necessity to construct a 39 mile transmission pipeline across northeastern PA.

“While natural gas drilling is already impacting the area, we believe that construction of a 39-mile transmission pipeline as proposed in this project without an adequate environmental assessment is beyond what this region should be asked to bear and may cause irreparable harm… As FERC is aware, approving the Certificate automatically gives CNYOG eminent domain rights over privately held land[33]. “

VI. Impact on Local Communities: Not Everyone is a Winner

Referring to the “Penn State Studies”, Timothy Kelsey commented that most of the money projections are based on royalty payments, a one-time benefit and not a recurring economic benefit. He also points out that we can’t assume – as these studies did – that all of this money would be spent in the local community. Other studies assume a much more modest rate somewhere between 5% and 15% of windfall money spent locally[34].

While some business do better for a short while, 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[35].

According to Kelsey, Tourism and food industry are “thriving in the areas where Marcellus is”

Research studies cite decreased revenue from tourism, hunting and fishing, outdoor recreation, and wildlife-watching, lower crop yields due to ozone and other air pollutants and decreased sales by wineries and organic farmers due to both real and perceived contamination from gas drilling chemicals[36].

Recreation areas, farm and forest land is now crisscrossed with compressor stations, which are a major source of toxic air pollution, well pads, pipelines (also a serious subject) and land is stripped of trees. Research from past extraction communities says that new businesses choose not to move to communities surrounded by industrial sites. (sociologists call this the “crowding out” phenomenon)

In addition to the loss of revenue from outdoor related industries, communities with limited resources find themselves needing to hire additional police, fire fighters, health care workers and other civil servants to deal with the influx of new people, the traffic collisions, breakdowns, property damage and the pressures and damage on the physical and social infrastructure. These new expenses can add hundreds of thousands to a community's budget, with no corresponding funding.

From Cornell web site of Susan Christopherson[37]:

- Evidence from other shale plays shows that a longer-term regional industrial infrastructure develops which only supports the natural gas industry. This leads to "crowding out" – a lack of economic diversification, because the area is too expensive, congested and experiences air and water pollution.

- People with the most resources are the ones able to leave and there is little evidence of local people being hired.

- "… Natural resource extraction has a poor record of leading to strong, diversified regional economies. The declining productivity of some shale plays raises questions about what kind of investment in the Marcellus Shale region we can expect beyond a fairly short time frame."

A New York study speaks to this issue

> "Three sections taken directly from the Agricultural Economic Development Plan for Broome County … show the inconsistencies between encouraging gas drilling for economic development and the economic development plan that Broome County had already adopted in order to preserve the pristine environment while at the same time enhance economic development.
>
> Agriculture produces much higher economic multipliers than any other sector of the Broome County economy. Farms contribute to Broome County's rural character and protect open spaces essential to the quality of life for both permanent and seasonal residents. Farmland is a valuable future resource for the County in providing for a healthy and plentiful local supply of food products and generating new sources of farm income.
>
> It is clear that gas drilling would have a devastating effect on the agricultural, sporting and tourism industries in Broome County. If Broome County legislators encourage gas drilling, then they will be working counter to their economic development plan[38]."

"Moreover, the experience of many economies based on extractive industries is a warning that their short-term gains frequently fail to translate into lasting, community-wide economic development. Most alarmingly, in recent decades credible research evidence has grown showing that resource dependent communities can and often do end up worse off than they would have been without exploiting their extractive sector reserves. When the metaphorical economic waters recede, the flotsam left behind can in some circumstances be seen more as the aftermath of a flood than of a rising tide[39]."

The subject of costs left behind after the boom is described in several of the references below. Public costs include remediation – to the extent possible - of air and water pollution for generations to come. Municipalities will incur indebtedness from the need to employ staff for their overburdened fire fighters, EMS and health care workers, and police departments as well as repair stressed physical infrastructure.

A report from Troy Hospital in Bradford speaks to medical and emergency related issues as stressors on local resources[40]

VII. The View From the West

From a Dallas news editorial:

> "Local governments across North Texas are sounding alarms about the possibility of increased air pollution, groundwater contamination, noise and declining property values coinciding with drilling companies' push into urban areas.
>
> These concerns are not overblown, as reports in The Dallas Morning News and Denton-Record Chronicle have borne out. The negative experiences of other North Texas cities that more hastily approved drilling have caused the Dallas City Council to apply the brakes until it can get key questions answered. The council is forming a task force to study the issues before taking steps to permit drilling on city-owned sites leased by two production companies, which have paid $33 million for the privilege[41]."

(From Mayor of Dish, Texas)

"This baffled me how essentially the total value of the town drops every year, while we were experiencing massive growth…When (the tax assessors) explained the mineral values were the cause of this drop, and that was sixty percent of our tax base, I was again stunned. As you know we are located in the middle of the Barnett Shale, and have had a great deal of exploration in this area. So what would cause the values to continue to drop? This was also during the timeframe when natural gas prices were climbing to all time record highs"[42].

From Headwaters Economics research group[43]:

> The local costs and benefits of energy development are experienced unevenly: "fossil fuel prosperity" is more likely to occur in places that are the exception rather than the rule in the U.S. West.
>
> The volatility of fossil fuel markets poses obstacles to the stability and long-term security of economic growth in energy-producing regions. Fossil fuel extraction, especially when prices are high, creates an enormous amount of wealth, most of which currently leaves the region.
>
> Other evidence suggesting caution in projecting long term economic development from natural gas drilling comes from a study of 26 counties in Western States that have based their economic development on the extraction of fossil fuels (natural gas, oil, and coal). This study shows that these counties…have not performed as well as similar counties without extraction industries

Both their average annual growth in personal income and their employment growth (1990-2005) were lower than their peer counties without extraction industries…They had:

- Less economic diversity
- Lower levels of educational attainment
- More income inequality between households
- Less ability to attract investment

- Also, a majority of the energy industry focused counties (16 of the 26) lost population during this period. .. (the reasons) may include the higher cost of living in these counties and the displacement of residents who do not want to live in an industrialized landscape -- for example, retirees.

From a report on health in Texas:

> "Too often citizen testimonies of health effects or evidence gathered by citizens are dismissed as anecdotal evidence; and as long as each case is treated as an isolated incident, the larger pattern is ignored. But when so many citizens across almost two dozen counties report similar complaints and symptoms associated with gas drilling, something is wrong.[44]"

From studies of the Air in the West[45]

- A 2009 Southern Methodist University study found summertime emissions of smog-forming pollutants from the oil and gas sector in the Dallas-Fort Worth area exceed emissions from motor vehicles.

- A 2008 analysis by the Colorado Department of Public Health and Environment concluded that smog forming emissions from Colorado's oil and gas operations exceed vehicle emissions for the entire state.

- In 2009, for the first time in the state's history, Wyoming failed to meet federal health-based standards for air pollution. According to the Wyoming Department of Environmental Quality, emissions from the state's growing oil and gas sector are to blame.

VIII: Tax Benefits: For Whom?

Returning to the third "Penn State Study,

"…the results don't match verifiable data from other sources…in every instance, the numbers in the industry-funded study are higher than what can be verified elsewhere...The $1 billion in tax revenue is a good example. The study includes a wide range of "indirect" effects in that number… including hunting and fishing licenses that might be purchased with Marcellus money…The vast majority is property taxes and sales taxes paid by restaurants and that sort of thing…The Dept. of Revenue cast "a really wide net" to determine the taxes actually paid by the industry itself and came up with $200 million…There's a lot of difference between $1 billion and $200 million[46]."

It appears that the Marcellus Shale Coalition is continuing the strategy of claiming all activity, no matter how it was generated, as its own.

Information Summarized from The Pennsylvania Budget and Policy Center[47],

Natural gas drillers in Pennsylvania pay very little in state and local taxes, despite industry claims to the contrary.

- Of the 783 companies to file corporate net income tax returns, only 15% owed any tax. Nine of the top 10 permit holders in the Marcellus Shale…structure their businesses as limited liability companies (LLCs) or limited partnerships (LPs) so that income from the project "flows" back to the owner who pays the tax. ..at the 3.07% personal income tax rate, rather than the 9.99% corporate net income tax rate. …At least 80% of the total number of permit holders are now operated by LLCs or LPs.xi

- Oil and gas companies receive many federal tax incentives that can sharply reduce their federal income taxes and, in turn, cut their state tax payments and reduce the state income taxes that drillers pay, regardless of whether they are structured as a corporation … or as individuals in an LLC/LP that pay the personal income tax.

- Drilling companies are exempt from property taxes on oil and gas reserves, and most of the equipment used in the drilling process, including supplies and equipment directly used in manufacturing, oil and gas production, such as fracking chemicals, drilling equipment, pipes used to convey gas to processing plants, testing equipment, and pollution control devices are all tax free in Pennsylvania.

- Drillers don't have to pay local business privilege taxes because gas drilling is considered "manufacturing" and is exempted.

- Loopholes in Pennsylvania's corporate tax system allow drilling corporations to reduce their tax bills. By using Delaware Holding Companies, management fees, and non-market-based transfer prices to shift profits out of state, reducing their corporate tax liabilities here.

- State and local hotel taxes are waived on the long-term rental of living quarters for industry workers shipped in to Pennsylvania from Texas, Oklahoma and other energy-rich states.

> "In other words, local jurisdictions with natural gas wells very likely will face higher demands for services and thus higher costs, and yet receive little new revenues to pay for those services. The result likely will be higher local taxes (paid for by everyone, not just those directly benefiting from lease or royalty revenues), or cuts in other services.[48]"

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