

NIMBYs or Concerned Citizens?

Responding to Shale Oil and Gas Development

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PLANNERS, policy makers and citizens in US states where “fracking” for natural gas and oil is occurring have to sort out conflicting narratives about the development of these fossil fuel resources. In one narrative, people who raise questions about shale development are frequently described as NIMBYs: people who want the resource to be developed and will use it, but don’t want it developed near them, i.e. “Not In My Back Yard.” The NIMBY label is pejorative, intended to depict people who raise questions about shale development as selfish and uninformed.

But an examination of the concerns raised during local policy making in communities that may be affected by shale oil or shale gas development indicates that the NIMBY label is unwarranted. Questions about the costs and trade-offs involved in shale development are substantive and informed by evidence. They raise issues about the economic and social viability of places where this type of resource development occurs, the policy-making process, and the ability of

communities to control their own future. A sizable subset of shale development opponents resist fossil fuel development generally and favor more public and private investment in distributed, renewable energy. To caricature resistance to shale resource development as NIMBYism misrepresents the public response.

Long Ago and Far Away?

When Americans think about resource extraction industries, they think of places that are sparsely settled and far from cities. Although the US has a rich lore of “boomtowns” and “ghost towns”, Americans rarely connect this history – and the boom-bust cycle it depicts – to contemporary resource development. The disparity between resource extraction realities and public perception is widened by a pervasive sense that dirty, dangerous industries are a thing of the past and have been replaced by service industries – “Eds and Meds.” Thus, the development of shale resources has taken many Americans by surprise.

The development of US shale plays is both similar to and different from our historical experience. The technology – combining horizontal drilling and high volume hydraulic fracturing (commonly referred to as *fracking*) – may be new, but like all resource extraction industries, fracking is both dangerous and dirty, and it will produce the same cycle of boom and bust that is so much a part of the history of American mining towns.

This has particular importance for planners because it is their role to anticipate and address the long-term implications for land use and the health and welfare of communities.



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What is different about the current shale boom, and the industrialization that accompanies it, is its scale. Prospective drilling sites alone raise policy issues for at least 28 states, thousands of local governments, and for the federal government as well. Drilling is occurring or may occur in a wide variety of landscapes – in or near major cities, in residential neighborhoods, in semi-rural environments, and in isolated rural communities. And the risks of shale development extend outward, to communities from which drilling inputs (sand, chemicals and water) are drawn, or on the roads and rails en route to the drill sites, or through which wastewater is transported for disposal and the gas and oil flows to market.

Understandably, because a wide range of communities may be impacted by shale development, responses have varied. Regulation is primarily a responsibility of state government, and local responses are affected by state law, politics and history. States with a history of intense resource development such as Texas, the headquarters of the global oil and gas industry, have responded differently than states such as Michigan or New York, for whom this sprawling heavy industry is a recent phenomenon.

As local concerns about shale development have been voiced, industry officials have resorted to characterizing those who raise questions about the costs and trade-offs as NIMBYs: people who want the resource developed and will use it, but don't want it developed near them. Responding to what they call NIMBY "activist" resistance to fracking, industry representatives acknowledge that fracking causes problems, but they contend that the industry has long experience in addressing any and all concerns. Then they concentrate on the technical issues, including water contamination, toxic water disposal, and earthquakes from injection wells. According to one industry observer in *Crain's Cleveland Business*:

"So if none of these problems are new, why all the uproar now? ... For the first time, we are seeing oil and gas developed in densely populated ... areas that have not in modern times had to endure the inconvenience of oil and gas development."

For localities, however, this is much more than an inconvenience.

Are Concerns Real or Imagined?

While much is made of the economic benefits of shale development, seldom is the other side of the ledger mentioned: the costs to states and local communities. If we look at the types of questions raised in communities that may be affected by shale gas and oil development, citizens and policy makers are concerned about the health, safety, quality of life, short-term public costs and the long-term economic future in their communities, not just the technical/environmental impacts of fracking. Their questions about the trade-offs involved in shale development are substantive and informed by evidence.

As shale development has proceeded across US states, more information has become available about its short-term and long-term costs and reported benefits. This information is rarely systematic because states do not collect baseline data before permitting drilling, nor do they collect information on what happens in the communities where it occurs. But over time, a national network of local sources has assembled evidence about the downside, while news stories and case studies in places like Bradford County, PA and Williston, ND have provided a fairly comprehensive picture of what can happen.

Certainly a few people benefit, notably resident and non-resident landowners with enough desirable acreage to lease to drillers and obtain royalties. There are also a lot of losers – renters, small property owners, people without mineral rights, and businesses crowded out by a drilling boom.

Although environmental issues usually predominate among community concerns, local governments are concerned about public costs. Most visible to local officials are the likelihood of increased traffic and road damage, possible increases in crime, dangerous industrial accidents, and the need for more professional emergency responders. There are documented impacts on hospitals, adverse effects from the skyrocketing cost of living in boomtowns, and the realization that the "community" may never be the same, as long-term residents tend to leave these newly industrialized areas because of those costs and disruptions. Once the boom ends, a drilling region may have a smaller population and less diverse economy than before the boom began.

These local and regional costs have been almost completely ignored by federal and state policy makers and the industry, who continue to use projected job numbers to promote shale development, despite evidence that actual job numbers have been much lower. At the grassroots, however, both skepticism about the economic benefits and a growing understanding of the true costs are important to how local policy makers and citizens view shale development.

These very real concerns are not captured by a NIMBY label. Indeed, Matthew Cotton, who has studied the origins of negative community reactions to energy facility development in the US and UK, asserts that to describe opponents as NIMBYs is not only ineffective, it is also wrong.

What Public Officials Told Us About Community Perceptions of the Risks

In 2012, we developed a database and conducted a systematic study of local governments that had passed resolutions or legislation on shale gas development in the Marcellus Shale states. 266 of them were in New York (which has not yet authorized HVHF shale gas development) and Pennsylvania (where HVHF drilling has been underway since 2008). We selected a stratified sample of those communities and conducted structured interviews with the highest-ranking public official or his or her designee in each. These 53 interviews obtained

information on the process of decision-making, the critical issues discussed in public meetings, and community expectations regarding oil and gas industry practices and State regulation/monitoring of the industrial activities associated with shale energy development.

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Although environmental issues topped the ranking of community concerns, particularly effects on water supply and water quality, localities that had taken legislative action were also concerned about economic consequences, public costs associated with increased traffic and road damage, and a variety of disruptions to local life. However, beyond their perception of specific environmental, economic and social risks lies a concern that those responsible for assessing, monitoring, and ameliorating any damage may be unwilling or unable to do

so. Of 48 or more respondents to each survey question, the majority consistently expressed concerns about the ability of either the oil and gas industry or government to protect the environment, their health, and their communities.

- Sixty five percent (65%) of respondents rated their confidence that the natural gas industry will protect the environment, health and safety of affected communities as low or not at all confident.
- Sixty five percent (65%) of respondents rated their confidence that the natural gas industry will protect the economic and social stability of affected communities as low or not at all confident.
- Sixty two percent (62%) of respondents rated their confidence that their State has the capacity to enforce environmental, health and safety regulations to protect affected communities as low or not at all confident.
- Sixty seven percent (67%) of respondents rated their confidence that their State will regulate drilling activity effectively to protect the economic and social stability of affected communities as low or not at all confident.

A lack of trust in those responsible for creating these risks and dealing with the harms is as much responsible for local community responses as fear of the risks themselves. This lack of trust needs to be addressed at all levels of government, and by the industry. Industry officials have contributed to a lack of confidence

in their accountability by repeated attempts to create “wobble room”. They say that shale drilling will not cause problems “if done right” by “responsible firms”. Given the number of operating companies in any shale play, each working through an array of subcontractors, this is an empty promise that provides ample opportunity to shift blame when accidents occur.

What Do Planners and Policy Makers Need to Consider?

To secure the long-term sustainability of regions and communities affected by shale resource development, state and local planners and policy makers need to address the risks in several ways.

First, policy makers need to conduct a thorough analysis of how their state, region, or community may be affected. Economic benefits may accrue to some, but not to the majority. Social disruption, economic burdens and environmental damage may be localized, or spread across whole regions, or appear in places remote from the well sites.

Next, officials need to anticipate the boom phase that accompanies resource development, and its potential for social and economic disruption. This includes identifying and mitigating the impact on existing local employers, and dealing with the increased pressure on services and facilities, both public and private. Well-documented baseline data on all facilities and services that may be affected during the

boom phase is a necessary prerequisite for local, county, or state governments to “price” the additional cost of shale development.

During the boom, drilling regions may not have sufficient capacity and revenue to meet the demands on police and fire, schools and housing assistance, road maintenance and traffic management, or hospitals and emergency response, so policy makers need to develop new revenue sources or revenue sharing mechanisms that compensate communities for the uptick in demand for facilities and services. Then, when new drilling falls off and as production declines – and tax receipts, royalty payments, business income, and jobs with it -- boom regions may find themselves in a period of steep decline in population and tax base, or simply one of significantly slower growth. Foresighted infrastructure planning and financing, and flexible fiscal tools, can help localities or a state to accommodate fluctuating revenues and service demands, as well as moderate overcapacity. Budgeting to build reserves and support economic development will be needed to weather the period after extraction ends.

The ability to control the pace and scale of oil and gas development, and to find ways to capture and extend private investment beyond the boom phase of the cycle, are critical to long term sustainability. Local zoning regulations, state permitting regulations, and comprehensive planning requirements such as those currently proposed by the State of Maryland can limit

the pace and scale of drilling while not preventing shale development. (Maryland’s *Recommended Practices for Marcellus Shale Drilling Released for Public Comment* is available at: http://www.mde.state.md.us/programs/Land/mining/marcellus/Pages/MSReportPartII_Draft_for_Public_Comment.aspx)

Policy makers at all levels of government and other stakeholders must work together to ensure that the full range of social and economic risks are identified and acknowledged, and that policies to mitigate those risks, and the means to implement them, are in place. All parties need to be engaged in the process, and emerge justifiably confident that the benefits and costs of shale resource development will be appropriately and equitably distributed. To label people with legitimate questions as NIMBYs is no substitute for good governance and fair business practices.

Full reports on these issues are available at: www.GreenChoices.Cornell.edu.

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