

# CONFRONTING AN UNCERTAIN FUTURE

## HOW U.S. COMMUNITIES ARE RESPONDING TO SHALE GAS AND OIL DEVELOPMENT

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In 2012, we conducted a systematic study of local government responses to HVHF shale gas development in the Marcellus Shale states. 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 public costs associated with increased traffic and road damage, and a variety of disruptions to local life. But beyond their perception of specific environmental, economic or social risks lies a concern that those responsible for mitigating these risks or assessing, monitoring, and ameliorating any damage may be unwilling or unable to do so.

### BACKGROUND

When people think about natural resource extraction, they think of places that are sparsely settled and far from cities and suburbs. The US has a rich lore of “boomtowns” and “ghost towns,” yet people rarely connect this history – and the boom-bust cycle it depicts – to contemporary resource development. Contemporary natural gas and oil development using the new technology of High Volume Hydraulic Fracturing (HVHF, commonly referred to as “fracking”), is both similar to and different from our previous experience. It will produce the same cycle of boom and bust at the local level, but it is occurring at scale that raises policy issues for at least 28 states, thousands of local governments, and for the federal government as well. Significantly, drilling is occurring or may occur in a wide variety of landscapes – near major cities, in residential neighborhoods, and in semi-rural environments as well as isolated rural communities. And the risks of shale development extend outward, to communities from which drilling material 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.



### WHAT DID PUBLIC OFFICIALS TELL US ABOUT COMMUNITY PERCEPTIONS OF THE RISKS?

One indication that communities are uncertain about their future in this new energy environment is the strong local response to HVHF shale gas and oil development.

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 natural 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. Those interviews obtained information on the process of decision-making, on the critical issues discussed in public meetings, and on community expectations regarding oil and gas industry practices and State regulation/monitoring of the industrial activities associated with HVHF. A full report on the results of this research is available at [www.GreenChoices.Cornell.edu](http://www.GreenChoices.Cornell.edu).

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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%) 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 similarly reported a lack of confidence that the natural gas industry will protect the economic and social stability of affected communities.
- Sixty two percent (62%) of the 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 the 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.

## CONCLUSION

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.

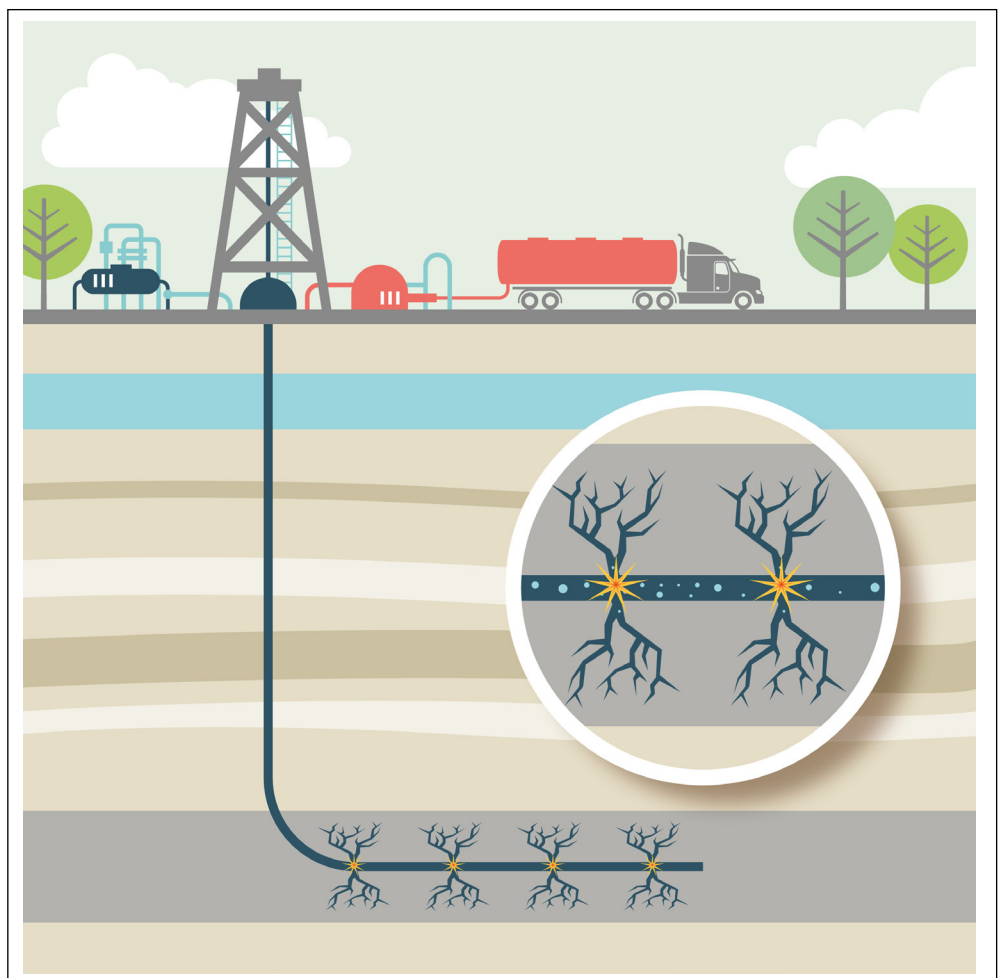
## WHAT DO POLICY MAKERS NEED TO CONSIDER?

To secure the long-term sustainability of regions and communities affected by HVHF natural gas and oil development, state and local 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 necessarily to the majority; social disruption, economic burdens and environmental damage may be localized, they may be spread across whole regions, or they may 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 in some cases 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



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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 with overcapacity. This can be a period of steep decline in population and tax base, or simply one of significantly slower growth. Foresighted infrastructure planning and financing can help mitigate the stresses. Flexible fiscal tools can enable localities or the state to accommodate fluctuating revenues and service demands. Budgeting to build reserves and support economic development can help communities weather the period after extraction ends.

Throughout, 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 in Maryland (Recommended Practices for Marcellus Shale Drilling Released for Public Comment is available on the Maryland Department of the Environment website at: [http://www.mde.state.md.us/programs/Land/mining/marcellus/Pages/MSReportPartII\\_Draft\\_for\\_Public\\_Comment.aspx](http://www.mde.state.md.us/programs/Land/mining/marcellus/Pages/MSReportPartII_Draft_for_Public_Comment.aspx)) can limit the pace and scale of drilling while not preventing shale development.

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 stakeholders need to feel engaged in the process, and emerge confident that the benefits and the costs of shale gas and oil development will be appropriately and equitably distributed. ♣

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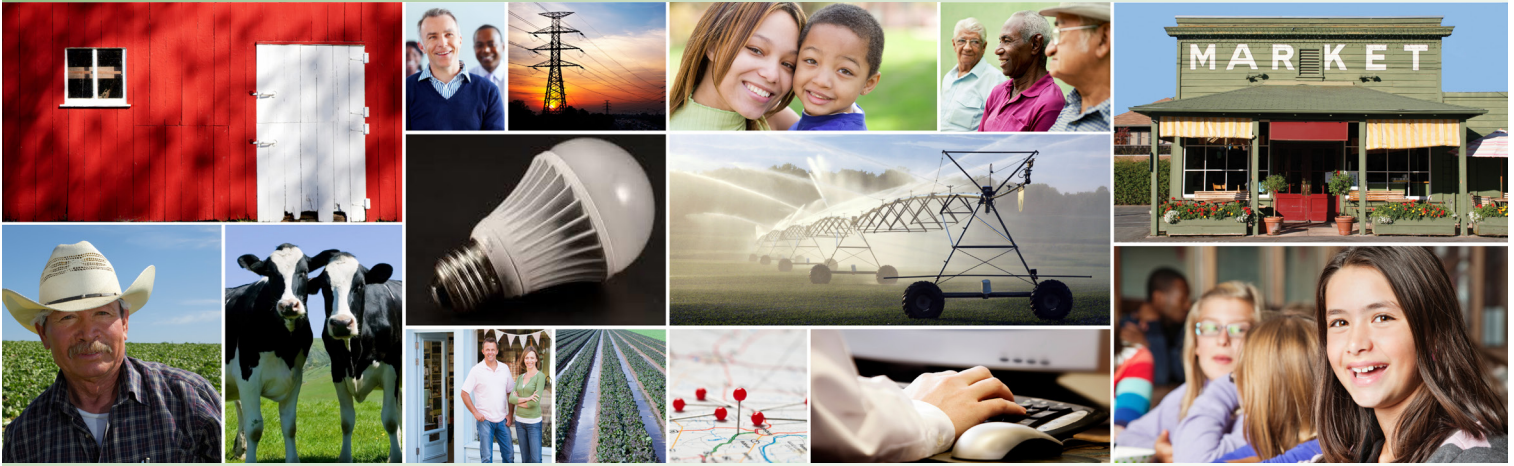
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