

Fighting Frack:
An Analysis of Advocacy Against Hydraulic Fracturing
in New York and Pennsylvania

By
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This paper examines the reaction of two neighboring states, New York and Pennsylvania, to a new natural gas extraction technique, high-volume horizontal hydraulic fracturing (“hydrofracking”). New York has a moratorium on hydrofracking, while Pennsylvania has been using the technique for several years. The specific focus of the research is the different advocacy techniques used by opponents of hydrofracking in each of the states, pre- and post-hydrofracking. Advocacy does not end after hydrofracking begins, but the results of this research indicate a shift in strategies used. This shift in advocacy techniques after the commencement of hydrofracking may be an evolution of advocacy on this issue that is transferable to other states facing hydrofracking, and may even be applicable to other environmental issues.

Introduction

Compare the following images:



Figure 1: View of the Pompey Valley, region subject to hydrofracking,
Image by Author



Figure 2: Springville natural gas drilling pipeline in Pennsylvania
Flickr user “arimoore” taken by Helen Slottje for Shaleshock
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This paper seeks to tell the tale of two states through a comparison of their advocacy in response to a new practice of natural gas extraction.

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Differences in advocacy styles, techniques, and approaches are dependent on many factors, including the expertise and preferences of the organization, the target of the advocacy (public opinion, the legislature, or administrative agency), and the environmental concern at issue. However, a comparison of advocacy techniques pre-and post-commencement of high-volume horizontal hydraulic fracturing (“hydrofracking”) in New York and Pennsylvania indicates that changes in advocacy also result from the shift from opposition to a practice to managing the effects of the practice after its implementation. Evolution of an environmental issue changes environmental advocacy techniques. This paper first provides a summary of the issue and the advocacy techniques used in each state. It then provides an in-depth exploration of the practice of hydrofracking, its benefits, and its costs. Next, New York State’s pre-hydrofracking advocacy environment and then Pennsylvania’s post-hydrofracking advocacy are considered in depth. Finally, the implications for the differences in pre- and post-hydrofracking techniques are discussed.

Summary of the issue of hydrofracking

Hydrofracking is a relatively new drilling technology that allows the extraction of more disperse, less dense, plays of natural gas from shale rock formations in the mid-Atlantic and northeast regions of the country, as well as formations in the West that have already been exploited.² Hydrofracking may have benefits in terms of greater employment rates, increased economic growth, revenues for state and local governments, and meeting more of our energy needs through domestic sources. Hydrofracking involves greater land use per well than the

² Interfaith IMPACT of New York State, Annual Legislative Briefing: Hydrofracking in New York State? “Let justice roll down like (unpolluted) water.”-Amos 5:24, (Mar. 13, 2011) available at <http://rochester.indymedia.org/newswire/display/26898/index.php> [hereinafter IMPACT Briefing] (transcript, pamphlet and written materials on file with author).

conventional natural gas drilling that currently exists in New York State.³ Greater quantities of water are necessary than in conventional drilling, and the additives to the water are also new and different from those used in conventional drilling.⁴ The potential environmental and health effects of the additives are relatively unknown and understudied.⁵ The potential for contamination from the spent fluid of surface and groundwater and thus wells for residential drinking water is uncertain, but possible.⁶ Shallow drinking water wells may also be subject to contamination by natural gas through surface water contamination. The spent fluid requires treatment to remove chemicals and radioactive materials that is beyond what is typically available at either municipal or industrial wastewater treatment plants.⁷ Additional issues include light pollution, increased traffic, transient populations, increased costs of living (particularly housing), air pollution, negative effects on climate change, adequacy of regulation and enforcement, and land-use.⁸ The density of drilling pads (up to one pad per square mile, with six wells per pad, each extending vertically one mile and horizontally one mile), reservoirs, water pipes, natural gas pipelines, power lines, additional roads, and peripheral industries such as quarrying, all dramatically and quickly change land use in an area where hydrofracking occurs.⁹

These effects have yet to occur in New York State due to its moratorium on hydrofracking. Advocacy in New York State seems to have a foundation in the precautionary principle, with a NIMBY component as well, and focuses on preventing hydrofracking.

Advocates want all the information from ongoing studies, before they make judgments about the

³ *Id.*

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*

⁹ *Id.*

costs and benefits of hydrofracking, regulations, enforcement, mitigation, and preventing concentration of costs on certain individuals and benefits on others.

Advocacy post-commencement of hydrofracking in Pennsylvania has noticeable differences from advocacy against hydrofracking in New York. Tactics and tenor of advocacy change pre- and post-commencement of hydrofracking. There may be more “outrage” and vociferous advocacy before hydrofracking, and the intensity of opposition depends on whether a landowner has leased their land, and for how much.¹⁰

Post-commencement advocacy in Pennsylvania includes gas companies inviting local advocates to join citizen boards to address concerns.¹¹ There is also more focus on ensuring that the public, via the government, receives some of the benefits from hydrofracking, rather than concentrating the benefits only on leasing landowners and the gas companies. The government is more involved in the advocacy than in New York. The advocacy in Pennsylvania also surrounds peripheral issues that often accompany hydrofracking, such as homelessness, traffic congestion, and land-use planning.¹²

Differences in advocacy between Pennsylvania and New York are not merely two states’ experiences with the issue, but are the consequence of chronology, and present the evolution of advocacy from the initial movement of an issue onto the public’s agenda through commencement of the activity.

Hydrofracking: An Overview

Description of the practice

Hydrofracking is not a new practice, neither is drilling for natural gas in New York State. However there are significant differences in the combination of technologies proposed for use in

¹⁰ *Id.*

¹¹ *Id.*

¹² *Id.*

hydrofracking in New York and currently in use in Pennsylvania, West Virginia, Arkansas, and many western states. Horizontal drilling is used to access reservoirs of gas and oil at angles from the well head. Hydrofracking has been used to create greater flow in vertical wells. However, the combination of hydrofracking in horizontal wells in clay-shale formations is a more recent advent and the hydrofracking that occurs in shale formations is entirely different from previous hydrofracking practices.¹³ Shale rock formations are held together extremely tightly, and tend to resist water, like the clay from which they were originally made. In order to further open fissures that already exist in the shale and to create new ones, large volumes of water, various chemicals, and other materials are injected into the well under high pressure to open up fissures and keep them open, as well as prevent the clay-shale from swelling and closing up due to its hydration.¹⁴

The diluted nature of the gas in the Marcellus and other shale formations requires greater density of wells, and there is less production over the course of a well's lifespan. Production for a well is reduced by three quarters in three years, at which point another well must be drilled. Between four and six wells can be drilled on one five-acre pad, after which another pad, at approximately one mile distance, will need to be drilled. The result will not be a five-acre pad every mile, but the average will be about that density.¹⁵

Benefits of the hydrofracking

There are a number of arguments put forth by proponents of hydrofracking. Some of these include its usefulness as an additional domestic fuel source to reduce dependence on

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

foreign sources, potential for less negative impact on the climate, job-creation and indirect economic stimulation, and revenue for state and local governments.¹⁶

Regarding the effects on climate change, one argument states that the use of natural gas could cut carbon dioxide emissions by seventeen percent, and could serve as a bridge fuel until alternative energy sources are available.¹⁷ The length of this bridge is debatable and depends in part on the price of natural gas and the capability of hydrofracking technology. Projections range from an additional eleven to thirty-seven years of production of natural gas.¹⁸

Safety is another concern, but proponents assert that in addition to the low rate of accidents, the chemicals used in hydrofracking fluid are at very low concentrations, in the range of about one percent of the volume of water used in a well.¹⁹ Some of these chemicals are also quite well known and commonly used, and others are neutralized by chemical interactions with the rocks before they return to the surface.²⁰

The significance of risks associated with hydrofracking is also contested. The proponents also regard the risks as low, even considering the contamination and accidents that have occurred, because the rate of accidents is fairly low, considering the tens of thousands of wells drilled, and that most accidents are the result of improper construction and/or maintenance of wells.²¹

¹⁶ *Id.*

¹⁷ Nicholas McCrea, *Some Scientists Say Hydrofracking Benefits Outweigh Risks*, THE POST-STANDARD, May 02, 2010, available at http://www.syracuse.com/news/index.ssf/2010/05/some_scientists_sat_hydrofrack.html.

¹⁸ Leon Brathwaite, *Shale-deposited natural Gas: A Review of Potential*, CALIFORNIA ENERGY COMMISSION, MAY 14, 2009, available at <http://www.energy.ca.gov/2009publications/CEC-200-2009-005/CEC-200-2009-005-SD.PDF>.

¹⁹ Nicholas McCrea, *Some Scientists Say Hydrofracking Benefits Outweigh Risks*, THE POST-STANDARD, May 02, 2010, available at http://www.syracuse.com/news/index.ssf/2010/05/some_scientists_sat_hydrofrack.html.

²⁰ *Id.*

²¹ Nicholas McCrea, *Some Scientists Say Hydrofracking Benefits Outweigh Risks*, THE POST-STANDARD, May 02, 2010, available at http://www.syracuse.com/news/index.ssf/2010/05/some_scientists_sat_hydrofrack.html.

Another common benefit attributed to hydrofracking is state and regional economic development. First, hydrofracking can increase in job opportunities in a region. One study found that extraction of natural gas from the Marcellus Shale play could create 280,000 jobs.²² West Virginia alone added 57,000 jobs as a result of hydrofracking in the Marcellus Shale in 2009.²³ Such increases in employment, needed in our current economy, not only benefit the newly employed individuals. Economic benefits from hydrofracking also may increase tax revenues for state and local governments.²⁴ State and local tax revenues in Broome County, New York are predicted to be approximately \$11,000 to \$12,000 per well over ten years.²⁵ Land owners also receive royalty payments if they lease their property to a gas drilling company.²⁶

Another argument for hydrofracking is that than any reduction in dependence on imported oil and gas resources allows the nation greater freedom in determining its foreign policy. The Marcellus Shale gas formation contains 168-500 trillion cubic feet of gas, with a recoverable amount of approximately 50 trillion cubic feet, or about the total amount used by New York State for the next 50 years.²⁷

Regardless of the relative risks and benefits, some proponents of hydrofracking in New York nonetheless contend that strong regulations, vigorous enforcement, adequate wastewater treatment facilities, and a slow and steady approach is appropriate.²⁸

Costs and other negative impacts of hydrofracking

²² American Petroleum Institute, Energy Tomorrow: Shale Gas, no date, <http://energytomorrow.org/issues/energy-security/throughout-the-world/shale-gas/> (last visited May 18, 2011).

²³ *Id.*

²⁴ *Id.*

²⁵ See NYS Department of Environmental Conservation Draft Generic Environmental Impact Statement, Sept. 30, 3009, 2-3, available at <ftp://ftp.dec.state.ny.us/dmn/download/OGdSGEISFull.pdf>.

²⁶ *Id.*

²⁷ *Id.*; New York State Department of Environmental Conservation, Marcellus Shale webpage, <http://www.dec.ny.gov/energy/46288.html> (last visited May 15, 2011).

²⁸ Nicholas McCrea, *Some Scientists Say Hydrofracking Benefits Outweigh Risks*, THE POST-STANDARD, May 02, 2010, available at http://www.syracuse.com/news/index.ssf/2010/05/some_scientists_sat_hydrofrack.html.

Contrary to the argument that the use of natural gas from shale formations is a valuable additional domestic fuel source, it will likely only provide about one to two percent of total fossil fuel consumption in the United States.²⁹ This means that its affect on the price of fuels will be minimal.³⁰ Climate change will also be made worse in the twenty-year timeframe due to the higher intensity impact of methane on climate, and will have about an equal affect as coal in the 100-year timespan.³¹ Jobs resulting from the hydrofracking industry are by their very nature temporary, and many are filled by non-local applicants because gas companies seek to lower training costs by paying to relocate pre-trained workers.³² The economic impacts also follow a boom and bust pattern, rather than an increase and then stability.³³ Indeed, some sociological studies have shown that eighty percent of extractive economies end up more depressed after the extraction of the resource is complete, while only twenty percent are improved.³⁴ Local and state governments also fail to gain much revenue without sufficient taxing, such as a severance tax (New York and Pennsylvania are the only petroleum-producing states without one).³⁵ As the law stands, the only direct revenue to the state would be the nominal amount from permitting the wells.³⁶

Additional costs from hydrofracking concern harm to water quality. There are concerns about contamination of surface and groundwater, particularly potable well-water, by methane, radioactive materials, and chemicals from the hydrofracking fluid. Some of the fluid is left in the ground in the well, and some is recaptured as flow-back water and then kept in evaporation

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*; Posting of Nadia Steinzor to Earthworks Blog, <http://earthblog.org/content/tax-free-damage-marcellus-states-should-make-polluters-pay> (Jan. 5, 2011, 13:23, EST).

³⁶ IMPACT Briefing *supra* note 1.

ponds and/or sent to municipal wastewater treatment plants.³⁷ Many municipal wastewater treatment plants, some of which are clamoring for the fees that hydrofracking would bring, are incapable of fully treating all the contaminants (particularly radioactive elements) in the wastewater, and even some industrial wastewater treatment plants aren't able to fully treat the fluid.³⁸ Hydrofracking fluid contains numerous contaminants, some of which are potential carcinogens, such as radioactive elements, benzene, and toluene.³⁹

In addition to water quality, another concern about hydrofracking is water quantity. Millions of gallons are needed for each well, and this is usually supplied by surface water features (streams and lakes). Either small-scale retention ponds are needed at each site, with a number of tanker truck deliveries of water made each day, or larger reservoirs are created on hilltops to feed several drilling pads through gravity-fed PVC pipe systems, with all the water deliveries by tanker truck concentrated on specific sites at tops of hills.⁴⁰

Not only, as previously mentioned, are there no real windfalls to local governments, there are also additional expenses. Medical and emergency needs, including ambulance trips, increase due to accidents at the wells, in peripheral industries, and car accidents.⁴¹ Charitable medical needs also increase because the gas companies do not always provide health insurance for their employees.⁴² First responders, usually volunteer fire fighters in the rural areas, need additional training because they lack experience with hazardous and industrial emergencies.⁴³ There is also

³⁷ *Id.*

³⁸ Ian Urbina, *Regulation Lax as Gas Wells' Tainted Water Hits Rivers*, THE NEW YORK TIMES, Feb. 26, 2011, available at <http://www.nytimes.com/2011/02/27/us/27gas.html?ref=drillingdown>.

³⁹ IMPACT Briefing *supra* note 1.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.*

some evidence in some communities (Bradford, County, Pennsylvania for example) of a higher number of crimes committed, but it is unclear whether there were higher crime rates as well.⁴⁴

Another concern for residents of areas where hydrofracking is taking place is the higher cost of living, especially for those who are not employed by the gas industry.⁴⁵ Housing becomes scarce and more expensive, rental rates increase, and so does homelessness.⁴⁶

Unfortunately, these cost of living increases also disproportionately affect those with low-income or fixed-income and the elderly.⁴⁷

In addition to higher costs of living, lower property values usually accompany hydrofracking.⁴⁸ This can make it more difficult to sell one's home, or use the equity in a home for low-interest loans. This can lead to decreases in the quality of housing stock over time as people are unable to afford home improvements, and will not receive adequate return on their investments in increased value in their homes from improvements.

Another concern is that hydrofracking may be made less safe if there are inadequate regulations and/or inadequate enforcement.⁴⁹ In New York State, not only are the current regulations geared to the more conventional extractive oil and gas technologies, there have been significant layoffs to environmental enforcement personnel at the Department of Environmental Conservation. Additionally the rapid increase in the number of wells and the companies working them makes it difficult to keep up with enforcement needs.⁵⁰

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

Land-use planning is also affected by hydrofracking. The process is hindered by the necessary network of pipelines, power lines, water lines, and roads.⁵¹ Those local governments without adequate land-use plans and procedures in place before hydrofracking occurs will be at a great disadvantage, and will be more negatively affected as a result.⁵²

Hydraulic fracturing in the Catskill region of New York is of particular concern to New York City, as numerous watersheds in the area serve as NYC's untreated water supply. The Skaneateles Lake watershed, another area in the Marcellus shale gas formation similarly provides untreated water for the city of Syracuse and its suburbs.

There are also legal issues surrounding hydrofracking that may increase the caseload of courts in the areas where hydrofracking takes place. These issues include contract disputes, particularly regarding terms of leases signed.⁵³ Liability for contaminated well-water and other environmental effects is also being litigated. Any potential state or national regulations must also deal with whether and how much disclosure will be required as to the chemicals used in hydrofracking fluid and their ratios. The federal regulations are further complicated by the exempt status of hydrofracking with regard to water quality protection laws, such as the Safe Drinking Water Act.⁵⁴ Compulsory integration will also be litigated. This is the practice where, if sixty percent of a given spacing unit (designated by the company in its permit to the state) is leased, the remaining forty percent can be forced to lease their land as well, and may receive far less in royalties.⁵⁵

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ Bradley Field, New York State Department of Environmental Conservation, DEC Program Policy DMN-1: Public Hearing Processes for Gas Well Spacing and Compulsory Integration (Feb. 22, 2006) *available at* <http://www.dec.ny.gov/energy/28013.html>.

Lastly, gas drilling companies typically subcontract the closing of wells.⁵⁶ The closing of wells may be done improperly by fly-by-night contractors because the closing process is a cost to gas companies. They have already received the entire possible profit from a given well. There is no incentive, without strict regulation and enforcement, for either the gas company or the subcontractor to properly close wells.

Pre-Hydrofracking Advocacy in New York: A Proactive Approach

New York currently has a moratorium on hydrofracking, which means those in opposition to the practice use advocacy techniques aimed at preventing hydrofracking from occurring. These techniques include providing information, letter-writing campaigns, protest, networking, attracting media attention, and lawsuits. Central New York was chosen as a sample area for this study of advocacy against hydrofracking in New York State because it is an area directly affected by drilling in the Marcellus Shale Formation, has similarities to other upstate regions, with an urban center and significant rural characteristics, and shares with New York City the unique characteristic of an unfiltered water source for municipal drinking water in Syracuse. It has the additional benefit of being familiar to the author. There will of course be differences between Central New York and other areas of the state, but it has enough similar characteristics to make it representative. Additionally, the focus on this area of the state is not to the exclusion of pertinent information from other areas.

Information Dissemination

Dissemination of information about hydrofracking to increase knowledge of the public, legislators, and other elected officials seems to be a primary technique used by environmental advocacy groups opposed to hydrofracking in New York. Many environmental groups (and even some non-environmental groups), new and old, large and small, have held informational events

⁵⁶ *Id.*

regarding hydrofracking in Central New York and across the state. The Sierra Club Atlantic Chapter Iroquois Group (in CNY), which hosted no events focused on hydrofracking before 2008, has organized three informational events on hydrofracking since December 2008.⁵⁷ All of these meetings are free and open to the public.⁵⁸ Wales POWR (in WNY), a group of citizens concerned about water quality in the Town of Wales, held an informational meeting on hydrofracking, also open to the public, in February, open to the public in Aurora, NY and specifically invited local and state politicians.⁵⁹ Because hydrofracking will likely occur mostly in rural New York, some of the informational meetings have been geared specifically toward those interests.⁶⁰

For example, sometimes the informational event is not specific to hydrofracking, but environmental groups use the forum to inform the public about the issue. The newly formed Land Stewards of New York, some members of which are farmers,⁶¹ used this technique. They had a booth at the the New York Farm Show to inform landowners about their rights regarding New York State's compulsory integration rule, which is Land Stewards' particular focus within the broader context of hydrofracking.⁶² In addition, Cornell Cooperative Extension, an organization housed and supported by Cornell University and devoted to providing information

⁵⁷ Sierra Club Atlantic Chapter Iroquois Group of Central New York, Past Meetings, <http://newyork.sierraclub.org/iroquois/meetings-archive.html> (last visited Apr. 15, 2011).

⁵⁸ *Id.*

⁵⁹ GROW WNY, Public Educational Event on Hydrofracking Announcement Feb. 20, 2011, <http://www.growwny.org/component/events/event/987> (last visited Apr. 11, 2011).

⁶⁰ Ithaca's Food Web, Announcement of Panel Discussion, "Hydrofracking & Agriculture: The Promise & The Reality," sponsored by The Committee to Preserve the Finger Lakes, <http://ithacasfoodweb.blogspot.com/2011/02/event-hydrofracking-and-agriculture.html> (Feb. 16, 2011, 9:59 AM EST).

⁶¹ Email from Land Stewards of New York (February 19, 2011 2:04:51 AM EST) (on file with author).

⁶² Land Stewards of New York, Events Page, <http://landstewardsofny.org/category/events> (last visited Apr. 13, 2011).

to the public, used their presence at the New York State Farm Show to inform landowners about the process and protections available through leases when dealing with gas companies.⁶³

Informational meetings about hydrofracking have also been held by groups not specifically focused on environmental issues. Interfaith IMPACT of NYS is a progressive organization composed of Protestant, Reform Jewish, Unitarian Universalist, and other denominations.⁶⁴ Interfaith IMPACT advocates directly to New York State legislators (individually and as a whole to the Legislature), the Governor, and Administrative Agencies concerning many progressive causes, including the state budget as a moral document, separation of church and state, reproductive rights, the functioning (or lack thereof) of New York State government, and recently, hydrofracking.⁶⁵ Interfaith IMPACT presented a panel discussion of hydrofracking March 13, 2011 in Rochester.⁶⁶ This panel discussion was different from other informational meetings about hydrofracking in that it was the annual legislative briefing presented by Interfaith IMPACT. The topic this year just happened to have particular salience.⁶⁷

In addition to grassroots campaigns to inform the public and policymakers about hydrofracking, the academic world has also become involved. SUNY Upstate Medical University, Cornell University, SUNY Buffalo, SUNY Cortland, Vassar College, Barnard College, and Onondaga Community College have all held informational events, sometimes more than one, on hydrofracking.⁶⁸ An interesting component of the panel at Vassar College was the

⁶³ *Id.*

⁶⁴ Interfaith IMPACT of NYS, About Us, <http://www.interfaithimpactnys.org/> (last accessed Apr. 15, 2011).

⁶⁵ *Id.*

⁶⁶ Interfaith IMPACT of NYS, Hydrofracking in New York State? flyer, available at http://www.interfaithimpactnys.org/Alerts/IINYSHydroFrk.pdf?action_KEY=4965.

⁶⁷ IMPACT Briefing *supra* note 1.

⁶⁸ SUNY Upstate Medical University, Grand Rounds/Symposium: The Health Effects of Hydrofracking, April 12, 2011 flyer, available at http://www.upstate.edu/cnymph/pdf/hydrofracking_flyer.pdf; Cornell University, Environmental Law Society 2011 Energy Conference: Gas Drilling, Sustainability, and Energy Policy, Mar. 31-Apr. 2, 2011, <http://www.lawschool.cornell.edu/research/ELS/index.cfm> (last visited Apr. 15, 2011); SUNY Cortland, Panel Will Discuss Gas Drilling at SUNY Cortland Mar. 9, 2011,

incorporation of an environmental advocacy group as part of the panel.⁶⁹ Academic institutions and their members have a history of advocacy, although the role of the academic advocate is not wholly uncontroversial,⁷⁰ but the level of involvement in informing the public and policymakers about hydrofracking was surprising. However, academic advocacy, especially on this issue, may be due in part to the fact that academics are in the position to obtain the most current information on a topic given the resources available to them at institutions of higher education, including paid time to conduct research, specialized technology, and access to other experts in a field. This may be especially true for an emerging environmental controversy that is relatively understudied. The number and concentration of research universities in the area affected by hydrofracking may increase academic activity in hydrofracking advocacy, as may the Not In My Backyard (“NIMBY”) motivation for professors.

Letter-writing and other Lobbying Activities

Letter-writing campaigns and online signatures of petitions have been common practices by anti-hydrofracking advocacy groups. As part of its legislative briefing, Interfaith IMPACT provided form letters, with pre-addressed envelopes, to Governor Cuomo and President Obama

<http://www2.cortland.edu/departments/literacy/news-detail.dot?id=321442> (last visited Apr. 15, 2011); Cornell University College of Agriculture and Life Sciences Department of Ecology and Evolutionary Biology and School of Civil and Environmental Engineering, Mar. 15, 2011 PDF of presentation, *available at* <http://www.sustainablefuture.cornell.edu/news/NatGas-CSeq/attachments/20110315-Howarth-Santoro-Ingroffea.pdf>; University at Buffalo Law School, SUNY, Exploring the Legal Issues in the Context of Politics, Science, and the Economy, Mar. 28-29, 2011 flyer, *available at* <http://www.law.buffalo.edu/baldycenter/hydrofracking/> (all events were free and open to the public); Abram Brown, *Heated Debate at Hydrofracking Panel in Syracuse*, THE POST STANDARD, Apr. 9, 2011, *available at* http://www.syracuse.com/news/index.ssf/2011/04/heated_debate_at_hydrofracking.html; Riverkeeper, News & Events: The Question of Hydrofracking: Panel Discussion at Vassar College Mar. 23, 2011, <http://www.riverkeeper.org/news-events/events/other-events/the-question-of-hydrofracking-panel-discussion-at-vassar-college/> (last visited Apr. 15, 2011); Barnard College, What’s Water Worth? Hydrofracking and Its Impact on New York Drinking Water, Apr. 5, 2011 announcement, <http://www.barnard.edu/events/what%27s-water-worth-hydrofracking-and-its-impact-new-york-drinking-water> (last visited Apr. 15, 2011).

⁶⁹ Riverkeeper, News & Events: The Question of Hydrofracking: Panel Discussion at Vassar College, Mar. 23, 2011, <http://www.riverkeeper.org/news-events/events/other-events/the-question-of-hydrofracking-panel-discussion-at-vassar-college/> (last visited Apr. 15, 2011).

⁷⁰ See, e.g. Lee Foote, Naomi Krogman, & John Spence, *Should Academics Advocate on Academic Issues?*, 22 SOC’Y & NAT. RESOURCES: 579-589 (2009).

in opposition to hydrofracking; they were even willing to mail the letters for those in attendance at the informational event.⁷¹ In another example, Working Families Party has used online petitions to express support for the hydrofracking moratorium, and to ask Governor Cuomo to ban hydrofracking entirely.⁷²

Protest/Attracting Media Attention

There have been some protests during the campaign against hydrofracking in New York. There were two protests in Syracuse, one outside the NYS DEC Region 7 Headquarters, and another in a local park.⁷³ There was also an anti-hydrofracking day on April 11, 2011 that drew hundreds of protestors to Albany, New York.⁷⁴ Protesting serves to garner media attention, to which the articles covering the protest attest. There seems to be less protesting in Pennsylvania on this issue, which is odd because it seems that protesting has been equally-used, if not more so, to end a particular practice, not merely to prevent an undesired practice from beginning.

Networking

Some of the groups advocating against hydrofracking are quite newly formed, some for the specific purpose of preventing hydrofracking in New York, or at least influencing the terms under which it occurs. Because of this, the organizations must build their network. In one example, the Land Trust of New York began by involving a former State Senator who is also involved in agriculture, and then involving the leaders and an email list-serve from another campaign that was in opposition to a housing development.⁷⁵ The assumption was that those

⁷¹ IMPACT Briefing *supra* note 1.

⁷² Email from Working Families Party (February 16, 2011 5:52:13 PM EST) (on file with author).

⁷³ Fernando Alfonso, III, *Central New York Landowners Rally in Syracuse Against Hydrofracking*, THE POST STANDARD, Mar. 23, 2011, available at http://www.syracuse.com/news/index.ssf/2011/03/landowners_rally_against_hydro.html.

⁷⁴ *Rally Against Hydrofracking Draws Hundreds to Albany*, THE POST STANDARD, Apr. 11, 2011, available at http://www.syracuse.com/news/index.ssf/2011/04/rally_against_hydrofracking_dr.html.

⁷⁵ Email from Land Stewards of New York (February 19, 2011 2:04:51 AM EST) (on file with author).

who were leaders in opposition to a development might also be leaders of a new organization in opposition to hydrofracking.

Organization by External Entities: the EPA

Four meetings were held by the EPA regarding its study of Hydraulic Fracturing as part of its Stakeholder Involvement Strategy in Binghamton, New York, a city on the border of New York and Pennsylvania.⁷⁶ There were afternoon and evening sessions each on July 13 and 15, 2011.⁷⁷ The meeting was scheduled for Syracuse, New York, in its convention center, in part because Syracuse is at the center of the State, but the meeting was moved due to concerns about the security of the venue.⁷⁸ It was not the EPA that decided to move the venue, city of Syracuse and Onondaga county officials decided against hosting the event when the inquiries they received indicated they could expect as many as 5,000 participants.⁷⁹ The actual numbers were 590 attendees and 109 comments on the afternoon of July 13, 370 attendees with 102 comments that evening, 410 attendees with 124 comments the afternoon of July 15, and 300 individuals with 114 comments that evening, for a total of 1, 670 attendees. This number was large, but a far cry from the 5,000 that made the Syracuse change its mind about hosting the event.⁸⁰ However, this lower (although still quite high) turnout could also be due in part to the quick change in venue and the change from a central location to one that is more remote and less densely populated.

⁷⁶ U.S. EPA, Hydraulic Fracturing Stakeholder Involvement Strategy, Mar. 8, 2011, http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_hydroout.cfm#hfcomments (last visited Apr. 11, 2011).

⁷⁷ *Id.*

⁷⁸ Glenn Coin, *Safety Concerns Prompt OnCenter to Cancel EPA's Hydrofracking Hearing*, THE POST STANDARD, Aug. 10, 2010, available at http://www.syracuse.com/news/index.ssf/2010/08/safety_concerns_prompt_oncente.html.

⁷⁹ *Id.*

⁸⁰ U.S. EPA, Public Informational Meeting: Summary of Public Comments: July 13 afternoon and evening, and July 15 afternoon and evening, available at http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_hydroout.cfm#hfcomments.

Lawsuits

While New York State has not had lawsuits filed resulting from environmental, property, or personal damage due to hydrofracking in the state, the moratorium on gas drilling has resulted in other legal issues. The former Attorney General (and current NYS Governor) Andrew Cuomo settled with Fortune Energy in 2009 under a Consent Decree that provides re-negotiation of leases and payments to landowners. These landowners were threatened into continuing their leases beyond the stated terms when Fortuna sent them letters declaring that their leases were extended due to force majeure, namely New York State's moratorium on hydrofracking that prevented them from drilling and reaping the benefits of the lease.⁸¹ Landowners are also bringing individual suits against gas companies to determine whether force majeure claims by the companies are enforceable in their particular case.⁸² The Attorney General's stance is that the force majeure clause must be explicit in the contract, and will not be read in.⁸³

Local Government Action

A number of municipalities, Buffalo, Skaneateles, Marcellus (the Marcellus Shale Formation's namesake) Otisco, and others, have passed bans and moratoriums on hydrofracking within their boundaries.⁸⁴ Not only is this a concrete action that local governments can take to prevent hydrofracking within their boundaries, but it is also a form of advocacy. Particularly in

⁸¹ Press Release, Office of the Attorney General, Attorney General Andrew Cuomo Announces Agreement with Fortuna Energy allowing N.Y. Landowners to Negotiate New Natural Gas Leases (Nov. 24, 2009) available at http://www.ag.ny.gov/media_center/2009/nov/nov24b_09.html.

⁸² Jon Campbell, *Lawyers Fighting Gas Company Efforts to Extend Leases*, THE STAR GAZETTE, Feb. 16, 2011, available at <http://www.stargazette.com/article/20110216/NEWS01/102160364/Lawyers-fighting-gas-company-efforts-extend-leases>.

⁸³ See Press Release, Office of the Attorney General, Attorney General Andrew Cuomo Announces Agreement with Fortuna Energy allowing N.Y. Landowners to Negotiate New Natural Gas Leases (Nov. 24, 2009) available at http://www.ag.ny.gov/media_center/2009/nov/nov24b_09.html.

⁸⁴ Dog Sampson, *Buffalo Common Council Bans Hydrofracking*, YNN, Feb. 8, 2011, http://buffalo.ynn.com/content/top_stories/532835/buffalo-common-council-bans-hydrofracking/?ap=1&MP4 (last visited Apr. 15, 2011); John Stith, *Skaneateles Approves Six-month Ban on Hydrofracking*, THE POST-STANDARD, Jul. 15, 2010, available at http://www.syracuse.com/news/index.ssf/2010/07/skaneateles_approves_six-month.html; Catie O'Toole, *Otisco Bans Imposes Hydrofracking Moratorium*, THE POST-STANDARD, Dec. 14, 2010, available at http://www.syracuse.com/news/index.ssf/2010/12/otisco_imposes_hydrofracking_m.html.

the case of Buffalo, where it is rather unlikely that any hydrofracking would take place, it is a symbolic action in support of those areas where hydrofracking will take place, and a message to Albany and the federal government expressing the view of a municipality.

Post-Hydrofracking Advocacy in Pennsylvania: Reactions to the Practice

Advocacy techniques used in Pennsylvania reflect the fact that hydrofracking is already well-established in the state. Instead of more vociferous attacks on hydrofracking, the tone is more conciliatory, actions are focused on equalizing benefits from hydrofracking and mitigating harms from hydrofracking.⁸⁵ The different tools used by Pennsylvania, as opposed to New York, include lawsuits to mitigate specific environmental harms from hydrofracking, citizen groups convened by gas drilling companies, and exposés by the media.

Advocacy Organized by External Entities: Industry, the EPA, and other Governments

Gas companies have formed panels of citizens in communities in Pennsylvania to help resolve conflicts and problems that result from hydrofracking.⁸⁶ The EPA, in its Stakeholder Involvement component of its Hydraulic Fracturing study conducted a public hearing in July in Canonsburg, Pennsylvania. Nine hundred fifty individuals attended the meeting and 94 submitted comments. Public comments focused on ensuring a broad scope of the EPA study, with cradle-to-grave examination of the hydrofracking process and study of many factors, including cumulative impacts on health and the environment.⁸⁷ The public was also concerned about political influence on any regulations that may result from the study. From those in favor

⁸⁵ IMPACT Briefing *supra* note 1.

⁸⁶ *Id.*

⁸⁷ U.S. EPA, Hydraulic Fracturing EPA Public Informational Meeting: Summary of Public Comments, July 22, 2010, *available at* <http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/upload/hfsummarycanonsburg.pdf>.

of hydrofracking, there was concern that emotion and fear would cloud regulations of a useful energy source.⁸⁸

In addition to EPA-sponsored meetings, governments have been convening panels to oversee and create policy suggestions regarding hydrofracking in Pennsylvania. The County of Bradford, Pennsylvania created the Bradford County Natural Gas Advisory Committee in 2008 to work with gas companies, provide a forum for citizens to express their concerns, and have regularly scheduled informational meetings.⁸⁹ Committee meetings are held quarterly, and subcommittees of the Committee are held each month.⁹⁰

The Governor of Pennsylvania has also convened a statewide Marcellus Shale Advisory Commission.⁹¹ The Governor created the Commission by Executive Order 2011-01 in March of 2011.⁹² The Commission is to convene meetings and create a report before the term of the Commission ends, July 22, 2011.⁹³ The Commission is made up of at minimum 25 members, at most 35 members, and the Governor chose to have 30 members.⁹⁴ The Commission is composed of State Secretaries of administrative agencies, such as Agriculture, Economic Development, Environmental Protection, Energy, and Transportation.⁹⁵ Government relations officers from gas

⁸⁸ *Id.*

⁸⁹ Bradford County, Natural Gas Information, <http://www.bradfordcountypa.org/Natural-Gas.asp> (last visited Apr. 15, 2011); IMPACT Briefing *supra* note 1.

⁹⁰ Bradford County, Natural Gas Information, <http://www.bradfordcountypa.org/Natural-Gas.asp> (last visited Apr. 15, 2011).

⁹¹ Robert Swift, *Shale Advisory Panel Holds First Meeting*, CITIZENS VOICE, Mar. 26, 2011, <http://citizensvoice.com/news/drilling/shale-advisory-panel-holds-first-meeting-1.1123897#axzz1JcIKXO82> (last visited Apr. 15, 2011).

⁹² Exec. Order 2011-01, Commonwealth of Pennsylvania, Tom Corbett, Governor, Creation of Governor's Marcellus Shale Advisory Commission, Mar. 3, 2011, *available at* http://www.portal.state.pa.us/portal/server.pt?open=512&objID=708&PageID=224602&mode=2&contentid=http://pubcontent.state.pa.us/publishedcontent/publish/cop_general_government_operations/oa/oa_portal/omd/p_and_p/executive_orders/2010_2019/items/2011_01.html.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ Pennsylvania Marcellus Shale Advisory Committee Member List, Mar. 24, 2011, *available at* http://files.dep.state.pa.us/PublicParticipation/MarcellusShaleAdvisoryCommission/MarcellusShaleAdvisoryPortalFiles/MSAC_Members.pdf.

drilling companies, such as Chief Oil & Gas, Chesapeake Energy, Chevron, and officers of oil and gas associations and chambers of commerce, and other industry groups are also part of The Commission.⁹⁶ Local government officers, such as County Executives, and officers of local government organizations are also represented.⁹⁷ There are also three representatives from environmental organizations: The Nature Conservancy, The Chesapeake Bay Foundation, and the Pennsylvania Environmental Council.⁹⁸ There is one representative of both the scientific community and the academic community, a professor in geoscience from Penn State University.⁹⁹

Media Coverage

Media coverage of hydrofracking in Pennsylvania has been extensive. Somewhat oddly, the New York Times has given considerable coverage to the issue, even investing in investigative journalism.¹⁰⁰ However, while it may seem odd for a New York paper, albeit one with tremendous national and international scope, to focus on an environmental issue in Pennsylvania, New York has much to gain from better understanding the perils and benefits of hydrofracking in a neighboring state that was first out of the gate on hydrofracking. The New York Times may also be influenced in its coverage due to the potential harm and tremendous cost to New York city if its drinking water source becomes contaminated due to hydrofracking.

Lawsuits

Similar to other industrial environmental concerns, the courts seem to be a ripe and useful form of advocacy for residents in Pennsylvania who believe their health and/or property has been

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ See *Drilling Down Series*, NEW YORK TIMES, Feb. 27- Apr. 4, 2011, http://topics.nytimes.com/top/news/us/series/drilling_down/index.html?scp=1&sq=hydrofracking&st=cse (last visited Apr. 15, 2011).

harmful by hydrofracking. While some accidents are bound to occur in any industry given enough time, these cases argue that the gas companies were negligent in their operations. In *Berish v. Southwestern Energy Production Co.*, Berish asserts that Southwestern Energy improperly cased its gas well, thereby causing contamination of their drinking well and subsequent injuries.¹⁰¹ Interestingly for the gas companies, while the claim for emotional distress was dismissed, the claim for strict liability was not, and plaintiffs were granted leave to amend their complaint to include damages for inconvenience and discomfort.¹⁰² Last year, in *Fiorentino v. Cabot Oil & Gas Corp.*, the court held that sixty-three property owners sufficiently stated and alleged claims under Pennsylvania's Hazardous Sites Cleanup Act, common law medical monitoring requirements, and punitive damages for improper hydrofracking, which then released natural gas, methane, and other contaminants into the plaintiff's groundwater and on their land.¹⁰³ Advocacy in the courts can be a backstop when prevention or mitigation of an environmental harm fails. It can be the remedy when state regulation or enforcement is inadequate. The advocacy in these cases sets the stage and standards for hydrofracking lawsuits not only in Pennsylvania, but also in neighboring states, where these court cases will probably be influential. Thus, those injured will not only be able to mitigate their own harms, but also will be able to influence the government to create and/or enforce regulations and encourage companies to ensure better standards of quality, if only because the companies avoid the cost of lawsuits.

Conclusion

Advocacy methods and tenor change during the evolution of an environmental debate, as shown in the pre- and post-hydrofracking in Pennsylvania and New York. New York's proactive advocacy utilizes highly visible and public techniques, and is concerned a great deal with

¹⁰¹ *Berish v. Sw. Energy Prod. Co.*, CIV.A. 3:10-CV-1981, 2011 WL 382420 (M.D. Pa. Feb. 3, 2011).

¹⁰² *Id.*

¹⁰³ *Fiorentino v. Cabot Oil & Gas Corp.*, 750 F. Supp. 2d 506 (M.D. Pa. 2010).

garnering public support. Pennsylvania's reactive advocacy utilizes less visible and less public techniques concerned with remedying specific problems, which are usually more localized. For example, Pennsylvania's advocacy techniques, like reporting violations and filing lawsuits are more likely to involve just a few individuals, and will garner attention mostly through media coverage of the activities. An interesting result of neighboring states facing the same issue, one of which has put a moratorium on an environmentally controversial practice, while another readily adopted the same practice, is that media coverage of the results of the practice in Pennsylvania has been quite high. This attention is due to the significant interest in the subject by those in New York, and particularly those near New York City, whose flagship newspaper has the time and resources to devote to investigative journalism.

There are a number of similarities in the advocacy approaches taken by New York and Pennsylvania. One similarity is that the traditional environmental advocacy organizations are active on the issue in both states. Some of the big name environmental groups one would expect to be involved, such as the Nature Conservancy, Sierra Club, Trout Unlimited are active, and several progressive religious organizations are also taking action. It is possible that this characteristic was noticeable only because of a lack of comparison to other environmental issues, but it was surprising to see the number of religious groups involved, and the energy they have put forth on the issue of hydrofracking.

Both Pennsylvania and New York experienced comment hearings conducted by the EPA. It is interesting to note the while one meeting was held in Pennsylvania, one in Fort Worth, Texas, and one in Denver, Colorado, four meetings were held on two days in Binghamton, New York. New York is the only state in which hydrofracking has not yet occurred.

The make-up of Pennsylvania's State Committee on hydrofracking is interesting as compared to those individuals most involved in the hydrofracking debate in New York State. Noticeably absent are landowners and laypersons who may be most affected by hydrofracking. Noticeably overrepresented are government officials at the State cabinet level and members of the gas drilling industry. The informational panels established by interested groups in New York State have had a mix of experts in science, experts in the laws surrounding drilling, environmental activists, industry representatives, landowners, and laypersons (many of whom have gained expertise in the practice or have a background in pertinent subjects). The difference in the make-up of panels on hydrofracking in New York and Pennsylvania may have many causes: PA is defending a status of quo of drilling while NY is defending against drilling, PA's panel was established by the government that first allowed drilling, NYs have been established by interested groups (mostly anti-hydrofracking). However, the differences in the panels still seem significant, and will probably influence the report created by the Pennsylvania Governor's Marcellus Shale Advisory Commission.

The framing of hydrofracking as a moral issue has a different tone than other recent environmental debates, such as climate change, where the focus has been more on science than on morality (although this may be shifting as well). Differences between states that are at different stages in the progression of hydrofracking may be universal, or may be unique to the issue of hydrofracking. These differences may also be the beginning of changes in approaches to environmental issues in general that could have implications for other environmental challenges facing the United States and the world. Re-framing of environmental issues as moral issues is an area ripe for more examination and research.

Another similarity in advocacy in New York and Pennsylvania is the use of lawsuits by advocates in both New York and Pennsylvania. However, the focus of the lawsuits is quite different, with New York focusing on renegotiating terms of leases and Pennsylvania focusing on forcing gas companies to pay for remediation of environmental harms.

The number and diversity of advocacy techniques and of individuals and organizations involved in this environmental issue vary between states that are at different stages in the development of hydrofracking. In New York, pre-hydrofracking, there appear to be a greater number of events held that concern the issue, and many of them are informative, but there is a range of activities, from protests to academic panels, from small-group movie showings to presentations at events unrelated to hydrofracking. In Pennsylvania, there appears to be fewer events, they seem to be more closely tied to government (County long-term hydrofracking Committees and State panels), and are less antagonistic in tone. These differences may be due to differences between Pennsylvania and New York, or may, as asserted by this paper, indicate a shift in advocacy techniques with the progression of an environmental issue.