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Hydrofracking: Disturbances Both Geological and Political: Who Decides?

John R. Nolon* and Victoria Polidoro**

I. Introduction

CONTROVERSY SURROUNDS THE MINING OF SHALE GAS through a process known as hydraulic fracturing (hydrofracking) in the Marcellus Shale formation, one of the largest shale gas areas in the world. A debate is raging about its economic benefits and environmental impacts as New York state's Department of Environmental Conservation (DEC) considers what standards to require when it issues permits to drillers. New York state law gives permitting authority to DEC and calls into question the historical home rule authority of localities to control the location and land use impacts of gas wells, through comprehensive planning, zoning, and development regulations.

This article describes and discusses this debate, the tension between state and local control, local zoning limitations imposed on drilling and ensuing litigation, and options available to municipalities to control the impact of drilling on their local environment and economies.

The regulation, advocacy, and negotiation regarding hydrofracking raise critical questions for economic and environmental policy because the facts regarding this emerging technology are highly disputed, the forces pushing and resisting shale gas mining are powerful, and the authority of each level of government is unclear. At stake are critical policy issues about who decides issues that have national, regional, and local impacts and the role of regulation in developing effective strategies for resolving such complex environmental and economic conflicts.

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This article focuses on the New York debate, regulatory system, and the outcome of recent litigation after taking a brief look at the tepid but evolving federal influence on hydrofracking and the variety of approaches taken by other states where the technology is employed. Taken together, these approaches raise critical issues of governance: who should decide when the impacts of hydrofracking, both positive and negative, are acute at the local, state, and federal level. In Part II, we review federal and state actions and outline the considerable fact-based disagreements between the proponents and opponents of hydrofracking. In Part III, we examine the New York regulatory approach and its ambiguity regarding the distribution of governmental power between the state and its localities. This ambiguity has led numerous local governments to adopt total bans or moratoria on drilling within their jurisdictions; Part IV details the remarkable success they have had in court when challenged by the industry, at least for the present. In Part V, other strategies available to local governments to mitigate the adverse impacts of gas drilling on their populations and neighborhoods are explored as alternatives to total prohibition through zoning, or as approaches for localities to consider in states where local regulation is preempted. The article concludes, in Part VI, with some reflections on the implications of these recent events for our federal decision-making process.

II. The Promise and Perils of Drilling for Shale Gas

A. Overview

Over the past three years, state and local officials, business leaders, environmentalists, and the public have been locked in a fractious and escalating debate about whether and how to allow horizontal drilling for natural gas in New York.¹ Nearly every day for the past year a new article, report, or study appears that either lauds or vilifies hydrofracking. Reports on the first earthquake in New York's recent memory were not spared from the hydrofracking debate when it was discovered that drilling was being conducted near the epicenter of the quake.² Much of the attention regarding the promise and perils of drilling for shale gas is focused on the Marcellus Shale formation, which is

1. See, e.g., Scott R. Kurkoski, *The Marcellus Shale: A Game Changer for the New York Economy?*, 84 N.Y. ST. B.J. 10, 11 (2012).

2. See, e.g., Eric Niller, *Can Fracking Cause Quakes?*, SCIENCE ON MSNBC.COM (Jan. 9, 2012, 8:47AM), www.msnbc.msn.com/id/45903853/ns/technology_and_science-science/t/can-fracking-cause-quakes/#.T86VuMViqSp.

the one of the largest shale gas formations in the United States, underlying several Mid-Atlantic states, including 18,700 square miles in New York.³ Estimates of the number of wells that will result in this vast Marcellus region in New York alone range up to 40,000.⁴ Drilling in New York awaits the completion of a study on the draft rules that will govern state-issued permits.⁵

Hydrofracking has stimulated debates such as this in nearly every state with shale gas reserves.⁶ Hydrofracking is a well stimulation technique designed for areas underlain by large shale formations in which millions of gallons of water containing thousands of gallons of proprietary chemical slurries and a propping agent, such as sand, are pumped under high pressure down a well bore to create fractures in the hydrocarbon-bearing shale.⁷ This causes the release of the natural gas that the shale contains and allows it to be pumped to the surface.⁸ Some of the fluid mixture, known as “flow-back water,” returns to the surface where it is disposed of by being trucked to injection wells or water treatment plants. In New York, this raises a further complication since its geology is not favorable to injection wells.⁹ This, in turn, has led to a search for appropriate injection wells in other states and for treatment plants that can handle this wastewater, which are in short supply.

B. *New York State Action*

Under the Oil, Gas and Solution Mining Law (OGSML)¹⁰ the Department of Environmental Conservation (DEC) is the permitting agency and must study the potential environmental impacts of hydrofracking

3. N.Y. STATE DEP'T OF ENVTL. CONSERVATION, REVISED DRAFT SUPPLEMENTAL GENERIC ENVIRONMENTAL IMPACT STATEMENT ON THE OIL, GAS AND SOLUTION MINING REGULATORY PROGRAM: WELL PERMIT ISSUANCE FOR HORIZONTAL DRILLING AND HIGH-VOLUME HYDRAULIC FRACTURING TO DEVELOP THE MARCELLUS SHALE AND OTHER LOW-PERMEABILITY GAS RESERVOIRS 4-14 (2011), available at <http://www.dec.ny.gov/data/dmn/rdsgeisfull0911.pdf> [hereinafter REVISED dSGEIS].

4. *Id.* at 6-6.

5. Michael J. Mishak, 'Fracking' is Widely Used in State: Regulators, Legislators Know Very Little About How the Extraction Process is Employed, L.A. TIMES, Mar. 15, 2012, at AA1.

6. While this article focuses on New York, communities around the country are facing similar challenges. *See id.*

7. *See* REVISED dSGEIS, *supra* note 3, at 5-5.

8. *See id.* at 5-32.

9. *New York Fracking Debate Focuses on Wastewater*, HUFFINGTON POST (Feb. 21, 2012) http://www.huffingtonpost.com/2012/02/20/new-york-fracking_n_1288696.html (“Other geologists have said New York doesn't have the right geology for such wells.”).

10. N.Y. ENVTL. CONSERV. LAW § 23-0303(2) (McKinney 2012).

before finalizing its regulations.¹¹ DEC has released a Revised Draft Supplemental Generic Environmental Impact Statement (Revised dSGEIS) regarding hydrofracking.¹² The gas drilling industry is waiting for the completion of the environmental impact statement and the finalization of drilling regulations before applying for permits. In the meantime, the industry is laying the groundwork for obtaining permits by acquiring drilling rights on leased land.

DEC and industry forces read the OGSML as preempting local zoning and land use control of the location of wells. In response, some localities whose lawyers read the law differently have enacted various controls on the location of gas wells to protect their community character and environment. Landowners and the industry, in turn, have sued these municipalities. Deciding the underlying issues in these cases will take years as these cases wind their way through the New York court system.

C. *The Emerging Federal Presence*

Although federal policy regarding the regulation of hydrofracking is under review, the process is not aggressively controlled under current regulations and guidelines.¹³ Both Congress and federal administrative bodies have been hesitant to exert comprehensive regulatory authority over hydrofracking. There are several strategies that the federal government could pursue.

The first option is regulation under the Safe Drinking Water Act (SDWA). Currently, hydrofracking is not regulated under the SDWA.¹⁴ The Energy Policy Act of 2005 exempted “the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal produc-

11. Under New York law, state and local agencies must complete an Environmental Impact Statement when their actions, such as permitting gas drilling, may have an adverse impact on the environment. *See* N.Y. COMP. CODES R. & REGS. tit 6, ch. VI, pt. 617 (2012).

12. *See* REVISED dSGEIS, *supra* note 3. Over 13,000 comments have been received. *Id.* at 1-4.

13. The discharge of flow-back water and the disclosure of chemicals used in hydrofracking and contained in that flow-back fluid, for example, were exempted from the permitting that would otherwise be required under the Safe Drinking Water Act by the Energy Policy Act of 2005. *See* 42 U.S.C. § 300h(d)(1) (2006). In October, 2011, EPA Administrator Lisa P. Jackson announced that the EPA will draft standards for regulating the handling and disposition of this wastewater. *See* Michael Rubinkam, *EPA to Regulate Disposal of Fracking Wastewater*, ASSOCIATED PRESS (Oct. 20, 2011), available at news.yahoo.com/epa-regulate-disposal-tracking-wastewater-202826614.html.

14. 42 U.S.C. § 300h(d)(1)(B)(ii).

tion activities” from the definition of “underground injection.”¹⁵ The aptly named Fracturing Responsibility and Awareness Chemicals Act of 2011 sought to repeal this exemption.¹⁶ Neither house of Congress has acted on this bill, despite recent urging by the legislative bodies of New York City and Rockland County, New York.¹⁷

Where diesel fuel is employed in the hydrofracking process, it is subject to federal regulation; EPA is currently in the process of drafting a guidance document to clarify the standards that must be met in this instance.¹⁸

The second option for federal regulation is under the Clean Water Act. Under this authority, EPA has announced that it is developing standards “for shale gas wastewater that must be met before going to a treatment facility.”¹⁹ This proposed rule is expected in 2014.²⁰

The federal government is also involved in the regulation of hydrofracking under the Clean Air Act. EPA has developed a set of Clean Air Act New Source Performance Standards (NSPS) for the oil and gas industry.²¹ Released on April 17, 2012, these regulations affect many parts of the natural gas industry, the most important being the regulation of new wells.²² The use of “reduced emissions completion” technology to “capture natural gas that currently escapes to the air” will “yield a nearly 95 percent reduction in VOCs emitted from more than 11,000 new . . . wells each year.”²³ This regulatory requirement

15. *Id.* § 300h(d)(1)(A), (B).

16. Fracturing Responsibility and Awareness of Chemicals Act of 2011, H.R. 1084, 112th Cong. (2011); FRAC Act, S. 587, 112th Cong. (2011).

17. See 158 CONG. REC. H1498-02 (daily ed. Mar. 21, 2012) (petitioning the Committee on Energy and Commerce and the Committee on Transportation and Infrastructure).

18. Leonard Dougal & Jacob Arechiga, *Shale Play Hydraulic Fracturing: Emerging Water Resource and Regulatory Issues*, ABA WATER QUALITY & WETLANDS COMMITTEE NEWSL., Mar. 2012, at 4.

19. Press Release, Env'tl. Protection Agency, EPA Announces Schedule to Develop Natural Gas Wastewater Standards/Announcement is Part of Administration's Priority to Ensure Natural Gas Development Continues Safely and Responsibly (Oct. 20, 2011), available at <http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/91e7fad4b114c4a8525792f00542001!OpenDocument>.

20. *Id.*

21. Oil and Natural Gas Sector: New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants Reviews, 26 Fed. Reg. 52738-01 (Proposed August 23, 2011) (to be codified at 40 C.F.R. pt. 60, 63).

22. *Id.*; see ENVTL. PROTECTION AGENCY, OVERVIEW OF FINAL AMENDMENTS TO AIR REGULATIONS FOR THE OIL AND NATURAL GAS INDUSTRY: FACT SHEET 1 (2012), available at <http://www.epa.gov/airquality/oilandgas/pdfs/20120417fs.pdf> [hereinafter FACT SHEET].

23. FACT SHEET, *supra* note 22, at 1. This technology “separates gas and liquid hydrocarbons from the flowback that comes from the well as it is being prepared for production.” *Id.*

does not seem to burden the industry, as EPA estimates that “revenues from selling the gas that currently goes to waste are expected to offset the costs of compliance.”²⁴

To coordinate these various regulatory efforts, an Executive Order signed on April 13, 2012, by President Obama, created an interdepartmental working group to “facilitate coordinated administration policy efforts to support safe and responsible unconventional domestic natural gas development.”²⁵

D. *Current State and Local Approaches*

These pending and possible federal actions, limited by current statutes and a reluctant, if not combative, Congress, focus attention on the states, which have plenary authority to regulate hydrofracking. True to Justice Brandeis’s characterization of states as laboratories within the federal system,²⁶ they are taking many different routes to regulation.

In California, where “[h]ydraulic fracturing has [already] been used on thousands of wells,”²⁷ the current administration has yet to draw up any rules on the hydrofracking method.²⁸ Pennsylvania allowed local governments to exercise limited control through zoning, until recently when the legislature adopted Act 13 superseding local ordinances that regulate oil and gas operations, including fracking operations, while strengthening state controls.²⁹

Michigan has issued instructions for conducting environmental reviews of hydrofracking operations under its little NEPA statute, the

24. *Id.*

25. Exec. Order No. 13,605, 77 Fed. Reg. 23,107 (Apr. 13, 2012).

26. *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

27. Mishak, *supra* note 5.

28. *Id.*

29. Local Ordinances Relating to Oil and Gas Operation (Act 13), ch. 33, 58 Pa.C.S.A. § 3302 (2012) (codified as amended at 58 PA. CONS. STAT. § 3302 (2006)). Act 13, also known as HB1950, was signed into law by Governor Corbett on Feb. 14. It amends the Pennsylvania Oil and Gas Act, preempting municipal zoning of oil and gas development and establishing an impact fee on natural gas. Some local governments and environmental groups filed suit on March 29, 2012 claiming that Act 13 violates the Pennsylvania and U.S. Constitutions and impermissibly endangers public health, communities, natural resources, and the environment. *Robinson Twp. v. Commonwealth*, No. 284 M.D. 2012, 2012 WL 1429454 (Pa. Commw. Ct. April 20, 2012); see ELIZABETH U. WITMER & SEAN T. O’NEILL, PIPELINES: ZONING PROVISIONS OF ACT 13 PUT ON HOLD IN PENNSYLVANIA 1 (2012), available at http://www.saul.com/media/alert/3157_OilGas041212.pdf. At the time of publication, the court has enjoined Act 13 while its constitutionality is challenged. *Robinson Twp.*, 2012 WL 1429454; see WITMER & O’NEILL, *supra* note 29, at 1.

Natural Resources and Environmental Protection Act.³⁰ It imposes requirements that drilling companies disclose the amount of water to be used, the amount of flow-back water pumped out following fracking, and the hazardous chemical additives used in the injection process, exempting trade secrets from disclosure.³¹ These regulations only apply to “wells using more than 100,000 gallons of fluid during the hydrofracking process.”³² The extent of authority of local governments to ban or control drilling activities is in doubt, with many local governments considering their options.³³

The Texas legislature recently passed a bill mandating disclosure of drilling processes.³⁴ These requirements include the total volume of water used and the presence of chemical ingredients,³⁵ with exemptions given to certain ingredients that constitute trade secrets.³⁶ While some localities have begun to propose and adopt fracking regulations, the state has yet to preempt local land use control of fracking.³⁷

E. *The Debate Over Hydrofracking*

The tension between state and local regulations is in sharp focus in New York, where proponents and opponents of hydrofracking have adopted conflicting interpretations of the state law authorizing the DEC to regulate oil and gas operations as to how far it goes in preempting local action. As this article discusses in Part IV below, several

30. STATE OF MICH. DEP'T OF ENVTL. QUALITY, SUPERVISOR OF WELLS INSTRUCTION 1-2011: HIGH VOLUME HYDRAULIC FRACTURING WELL COMPLETIONS (2011), available at http://www.michigan.gov/documents/deq/SI_1-2011_353936_7.pdf.

31. *Id.* at 3. See also Scott Detrow, *How Pennsylvania's Fracking Chemical Disclosure Rules Stack Up Against Other States*, STATEIMPACT (Aug. 12, 2011, 8:27 AM), <http://stateimpact.npr.org/pennsylvania/2011/08/12/whats-in-the-frack-how-pennsylvanias-chemical-disclosure-rules-stack-up-against-other-states/>.

32. Detrow, *supra* note 31.

33. *Local Bans that Stand: New York Towns Win Legal Challenges to Fracking Ban Ordinances*, BAN MICHIGAN FRACKING (Mar. 1, 2012), <http://banmichiganfracking.org/>.

34. Disclosure of Composition of Hydraulic Fracturing Fluids, 2011 Tex. Sess. Law Serv. ch. 1179 (West) (codified at TEX. NAT. RES. CODE ANN. § 91.851 (West 2011)).

35. *Id.* at § 91.851(a)(1)(B)(i), (ii) (referencing 29 C.F.R. § 1910.1200(g)(2) (2012)).

36. *Id.* at § 91.851(a)(4).

37. See Barclay Nicholson, *Texas Law Requiring Mandatory Disclosure Becomes Effective Very Soon*, HYDRAULIC FRACKING: FULBRIGHT & JAWORSKI L.L.P. (Feb. 13, 2012, 2:06 PM), <http://fulbrightfrackingblog.blogspot.com/2012/02/texas-law-requiring-mandatory.html>; but cf. Barclay Nicholson, *Texas-Wide Repercussions on Groundwater Regulation*, HYDRAULIC FRACKING: FULBRIGHT & JAWORSKI L.L.P. (Mar. 23, 2012, 6:45 AM), <http://fulbrightfrackingblog.blogspot.com/2012/03/texas-wide-repercussions-on-groundwater.html> (stating that as the Texas Railroad Commission already “regulates some of the groundwater used in oil and gas operations in the state,” disputes between the state, industry, localities, and private citizens over fracking seem imminent).

towns have imposed total bans on hydrofracking; they have been sued by the industry and have prevailed in the lower New York courts. This ambiguity in New York over legal authority and the diverse approaches in the states are understandable given the wide variety of views and facts prevalent in the public debate over hydrofracking.

Proponents of hydrofracking trumpet the economic benefits of drilling, citing the vast amounts of recoverable natural gas reserves: up to 410 trillion cubic feet,³⁸ and favorable prices of natural gas.³⁹ The New York DEC projects that hydrofracking will create anywhere from 13,491 to 53,969 jobs in New York State⁴⁰ and the Public Policy Institute estimates that the state could gain \$2.7 billion in value added and \$1 billion in local, state, and federal taxes.⁴¹ These local statistics are supported by national findings that “US manufacturers could employ approximately one million more workers by 2025,”⁴² thereby creating a situation where “[s]hale gas has the potential to spark a US manufacturing renaissance over the next few years, boosting revenue and driving job creation.”⁴³

Proponents note that New York has a long history of natural gas production, with 90% of the approximately 14,000 active wells having already undergone hydraulic fracturing.⁴⁴ In New York, DEC regulations would require the gas industry to employ drilling methods that are heralded by industry and its supporters as safe.⁴⁵ They point out that the regulations being reviewed under New York’s State Environmental Quality Review Act “are equivalent to the proposed requirements of the federal Fracturing Awareness and Responsibility (FRAC)

38. See Erich Schwartzel, *Shale Gas Estimate Plummets, Energy Dept. Cuts Expectations for Marcellus, But Output May Grow* PITTSBURGH POST-GAZETTE, Jan. 24, 2012, at A1.

39. See U.S. ENERGY INFO. ADMIN., NATURAL GAS YEAR-IN-REVIEW 2007 3 (2008), available at http://www.eia.gov/pub/oil_gas/natural_gas/feature_articles/2008/ngyir2007/ngyir2007.pdf.

40. REVISED dSGEIS, *supra* note 3, at 6-213, Table 6.32. The DEC bases these estimates on a sixty-year production cycle. *Id.* at 6-210. The agency’s projection also includes: 10,532 to 42,126 gas wells, a thirty-year productive life cycle for each gas well, and a thirty year build out. *Id.* at 6-209, Table 6.31.

41. Estimates also include 62,620 jobs, based on an assumption of 500 wells drilled annually. PUB. POLICY INST. OF N.Y. STATE, DRILLING FOR JOBS: WHAT THE MARCELLUS SHALE COULD MEAN FOR NEW YORK 16 (2011), available at <http://www.ppiny.org/reports/2011/Drilling-for-jobs-what-marcellus-shale-could-mean-for-NY.pdf>.

42. PRICEWATERHOUSECOOPERS LLP, SHALE GAS: A RENAISSANCE IN US MANUFACTURING 2 (2011), available at http://www.pwc.com/en_US/us/industrial-products/assets/shale-gas.pdf.

43. *Id.* at 12.

44. Kurkoski, *supra* note 1, at 11.

45. *Id.*

Act of 2011.”⁴⁶ Proponents point to the extensive mapping that must occur prior to drilling to ensure that there “are thousands of feet of impermeable rock” between the well and groundwater.⁴⁷ Natural gas has also been touted as a cleaner source of energy than oil and coal,⁴⁸ as one study found that “natural gas provides a cost-effective bridge to . . . a low-carbon future.”⁴⁹

Today, the United States is the world’s largest petroleum consumer, importing nearly 50% of that total from foreign countries.⁵⁰ Proponents note that reducing the United States’ dependency on foreign oil has many economic benefits including reduced domestic production costs,⁵¹ a more stable energy market, and obvious foreign policy advantages. And proponents seem to have the support of market momentum, as “[t]he federal Energy Information Administration estimates that electricity generation from natural gas will increase about 9 percent in 2012, at the same time that coal production declines almost 5 percent.”⁵²

While largely neglected in other contexts, proponents also note that while “[t]he share of natural gas as a transportation fuel has never been large, . . . it is growing rapidly.”⁵³ Just as in the electricity supply sector, natural gas’s flexibility and low cost have made it a viable option as a transportation fuel. While there are significant barriers to universal implementation,⁵⁴ already “[a]lmost 40 percent of new garbage trucks and 25 percent of new transit buses can run on natural gas,” with those numbers expected to rise in the future.⁵⁵

Opponents of hydrofracking point to credible sources that counter the optimistic forecasts of gas prices.⁵⁶ Recent studies have shown a

46. REVISED dSCEIS, *supra* note 3, at 1-9.

47. Kurkoski, *supra* note 1, at 12 (also stating that multiple studies have found fracking to be a safe extractive method).

48. See, e.g., PUB. POLICY INST. OF N.Y. STATE, INC., *supra* note 41, at 3.

49. MASS. INST. OF TECH., THE FUTURE OF NATURAL GAS: AN INTERDISCIPLINARY MIT STUDY 2 (2011), available at http://web.mit.edu/mitei/research/studies/documents/natural-gas-2011/NaturalGas_Report.pdf.

50. The U.S. consumed 19.1 million barrels per day of petroleum products in 2010. U.S. ENERGY INFO. ADMIN., HOW DEPENDENT ARE WE ON FOREIGN OIL?, (2012), available at http://www.eia.gov/energy_in_brief/foreign_oil_dependence.cfm.

51. Jim Motavalli, *Natural Gas Signals a “Manufacturing Renaissance,”* N.Y. TIMES, Apr. 10, 2012, at F6.

52. *Id.*

53. *Id.*

54. *Id.* (referencing the lack of refueling infrastructure and lack of production of natural gas-fueled personal vehicles).

55. *Id.*

56. The 2011 EIA Annual Energy Outlook report shows estimates of \$5/thousand cubic feet. See U.S. ENERGY INFO. ADMIN., ANNUAL ENERGY OUTLOOK 2011 3 (2011), available at [http://www.eia.gov/forecasts/aeo/pdf/0383\(2011\).pdf](http://www.eia.gov/forecasts/aeo/pdf/0383(2011).pdf).

significant decrease in the estimated amount of shale gas available, down 66% from last year.⁵⁷ Other economic indicators, such as jobs and taxes, are tied to the size of the reserves and, opponents claim, have not been adjusted downward to reflect the new reduced estimates of gas available. They also point to a myriad of potential adverse environmental impacts that hydrofracking may cause: depletion of groundwater, surface water pollution, ground water pollution, air pollution, increased truck traffic, loss of community character, creation of “boomtowns,” and earthquakes (seismicity).⁵⁸

Opponents point to DEC estimates that a single well may generate as many as 6,800 truck trips.⁵⁹ This truck travel has the potential to not only damage local⁶⁰ and state roads,⁶¹ but also to result in significant noise⁶² and air pollution in the surrounding area.⁶³ If this heavy traffic is left unchecked, many local town, city, and village centers could be overrun, resulting in congestion, noise, road damage, and pollution.⁶⁴

Opponents are concerned by a U.S. Geological Survey study that found that “[a] remarkable increase in the rate of [magnitude-3.0] and

57. The estimated amount of recoverable gas from the Marcellus Shale rose from 2 trillion cubic feet (TCF) in 2002, to 50 TCF in January 2008, to 363 TCF in November 2008, to 410 TCF by 2011, and then plummeted to 84 TCF in August 2011. See Mary Esch, *Gas Yield from Marcellus Shale Goes Up*, THE EVENING SUN, (Nov. 3, 2008), <http://www.evesun.com/news/stories/2008-11-04/5593/Gas-yield-from-Marcellus-shale-goes-up/>; Erich Schwartzel, *supra* note 38; DANIEL J. SOEDER & WILLIAM M. KAPPEL, USGS, WATER RESOURCES AND NATURAL GAS PRODUCTION FROM THE MARCELLUS SHALE 3 (2009), available at <http://pubs.usgs.gov/fs/2009/3032/pdf/FS2009-3032.pdf>; see also U.S. ENERGY INFO. ADMIN., AEO2012 EARLY RELEASE OVERVIEW (2012), available at http://www.eia.gov/forecasts/aeo/er/early_production.cfm (referencing lower estimates of recoverable shale gas).

58. See REVISED dSGEIS, *supra* note 3, at ch. 6 (discussing potential environmental impacts of hydrofracking). See generally Paul Gallay, *Gas Industry Spin Can't Cover Up Air, Water Problems Caused by Fracking*, HUFFINGTON POST (Apr. 2, 2012, 4:21 PM), http://www.huffingtonpost.com/paul-gallay/gas-industry-spin-cant-co_b_1392676.html (listing similar concerns voiced by opponents of fracking across the nation, as studies in Texas, Colorado, and Wyoming have found fracking to cause air pollution, soil contamination, and groundwater and well contamination).

59. REVISED dSGEIS, *supra* note 3, at 6-303 (estimating 3,950 heavy truck trips and 2,840 light truck trips per each “Horizontal Well with High-Volume Hydraulic Fracturing”).

60. *Id.* at 6-310.

61. *Id.* at 6-312.

62. *Id.* at 6-298.

63. *Id.* at 6-133.

64. For an excellent treatment of the impacts of hydrofracking that concern local residents and environmentalists, see Beren Argetsinger, Note, *The Marcellus Shale: Bridge to a Clean Energy Future or Bridge to Nowhere?* 29 PACE ENVTL. L. REV. 321, 330-38 (2011).

greater earthquakes is currently in progress in the US midcontinent.”⁶⁵ The study concludes that “the seismicity rate changes [studied] here are almost certainly manmade,” although further research is required to determine more accurately the nature of the relationship between oil and gas production and seismicity.⁶⁶

Many opponents dispute that natural gas derived from hydrofracking is a cleaner source of energy than oil and coal.⁶⁷ While natural gas burns cleaner than other fuels, they note that the accompanying release of methane into the atmosphere may exacerbate global warming because methane is over twenty times more potent than carbon dioxide as a greenhouse gas.⁶⁸ The authors of this study, however, did not account for the significant reduction of fugitive methane emissions attributable to EPA’s NSPS.⁶⁹ Finally, opponents point out that the high price of natural gas overseas will inevitably lead to its export, blunting the argument that shale gas will wean us from imported oil.⁷⁰

I. THE TENSION BETWEEN STATE AND LOCAL POWER

The gas industry and DEC have taken the position that the state has “preempted the field” of regulating hydrofracking and that municipalities may not use their zoning powers to govern the location and land use impacts of gas drilling.⁷¹ The question of whether a municipality

65. WILLIAM L. ELLSWORTH ET AL., U.S. GEOLOGICAL SURVEY, ARE SEISMICITY RATE CHANGES IN THE MIDCONTINENT NATURAL OR MANMADE? (2012), available at http://www2.seismosoc.org/FMPro?-db=Abstract_Submission_12&-sortfield=PresDay&-sortorder=ascending&-sortfield=Special+Session+Name+Calc&-sortorder=ascending&-sortfield=PresTimeSort&-sortorder=ascending&-op=gt&PresStatus=0&-lop=and&-token.1=ShowSession&-token.2=ShowHeading&-recid=224&-format=%2Fmeetings%2F2012%2Fabstracts%2Fsessionabstractdetail.html&-lay=MtgList&-find (only the abstract of the study is available at this time).

66. *Id.*

67. See RUTH WOOD ET AL., TYNDALL CTR. FOR CLIMATE CHANGE RESEARCH, SHALE GAS: A PROVISIONAL ASSESSMENT OF CLIMATE CHANGE AND ENVIRONMENTAL IMPACTS 8-9 (2011), available at http://www.tyndall.ac.uk/sites/default/files/tyndall-coop_shale_gas_report_final.pdf.

68. See Robert W. Howarth et al., *Methane and the Greenhouse-Gas Footprint of Natural Gas from Shale Formations: A Letter* (2011), available at <http://graphics8.nytimes.com/images/blogs/greeninc/Howarth2011.pdf> (explaining that “[t]he [carbon] footprint for shale gas is greater than that for conventional gas or oil when viewed on any time horizon, but particularly so over 20 years. Compared to coal, the footprint of shale gas is at least 20% greater and perhaps more than twice as great on the 20-year horizon and is comparable when compared over 100 years.”).

69. Oil and Natural Gas Sector, 76 Fed. Reg. at 52,756.

70. See Bill Lascher, *Debate Surrounds Race to Export America’s Natural Gas*, INSIDE CLIMATE NEWS (Feb. 21, 2012), <http://insideclimatenews.org/news/20120220/energy-firms-shale-gas-export-terminals-liquefied-natural-gas-Ing-eia-coal>.

71. See REVISED dSGEIS, *supra* note 3, at 8-1; Thomas West, Attorney, The West Firm, PLLC, Representing Chesapeake Energy Corp., Remarks at Pace Law School

can ban hydrofracking or limit the location of gas wells through zoning has become a divisive issue in the state and is currently working its way through the courts.⁷²

Like many other states, New York is a “home-rule” state; and, therefore, local governments have constitutionally-derived power to enact local laws relating to their property, affairs, or government, so long as such laws are not inconsistent with the constitution or a general law of the state.⁷³ In addition, localities have been delegated the power to regulate land uses through zoning.⁷⁴ The state’s highest court has recognized that “[o]ne of the most significant functions of a local government is to foster productive land use within its borders by enacting zoning ordinances.”⁷⁵

Zoning authority can be curtailed when the state has demonstrated the intent to preempt an entire field of regulation.⁷⁶ This prevents inconsistent local laws from “inhibit[ing] the operation of the state’s general law and thereby thwart[ing] the operation of the state’s overriding policy concerns.”⁷⁷ The intent to preempt can be explicit or can be implied through review of the state’s regulatory scheme regarding a particular subject.⁷⁸

When faced with a potential conflict between state and local zoning laws, courts will attempt to harmonize local and state legislative enactments, “thus avoiding any abridgment of the town’s powers to regulate land use through zoning powers” expressly delegated in the constitution and implemented through state statutes.⁷⁹ It is well settled that “[t]he mere fact that a state regulates a certain area of business does not automatically preempt all local legislation that applies to that enterprise.”⁸⁰

CLE Event, Hydrofracking: The Explosive Issue of Natural Gas Drilling within the Marcellus Shale in NY State (Apr. 14, 2011).

72. See *infra* Part IV.

73. N.Y. CONST. art. IX, § 2(c)(1); N.Y. MUN. HOME RULE LAW § 10 (McKinney 2012). For an in-depth discussion of the constitutional and statutory issues surrounding natural gas drilling regulation, see Michael E. Kenneally & Todd M. Mathes, *Natural Gas Production and Municipal Home Rule In New York*, 10 N.Y. ZONING L. & PRAC. REP., no. 4, at 1 (Jan./Feb. 2010), available at <http://counties.cce.cornell.edu/yates/documents/NaturalGasProduction.pdf>.

74. See N.Y. TOWN LAW §§ 261-263 (McKinney 2012); N.Y. VILLAGE LAW §§ 7-700, 7-702 (McKinney 2012); N.Y. GEN. CITY LAW § 20(24), (25) (McKinney 2012); Robert E. Kurzius, Inc. v. Inc. Vill. of Upper Brookville, 414 N.E.2d 680, 682 (N.Y. 1980).

75. DJL Rest. Corp. v. City of N.Y., 749 N.E.2d. 186, 191 (N.Y. 2001).

76. See Jancyn Mfg. Corp. v. Cnty. of Suffolk, 518 N.E.2d 903, 905, 97 (N.Y. 1987).

77. *Id.* at 906.

78. See *id.* at 907.

79. Frew Run Gravel Prods., Inc. v. Town of Carroll, 518 N.E.2d 920, 924 (N.Y. 1987).

80. Matter of Envirogas, Inc. v. Town of Kiantone, 447 N.Y.S.2d 221, 222 (N.Y. App. Div.1982), *aff'd*, 454 N.Y.S.2d 694 (N.Y. App. Div. 1982), *motion for leave denied*, 444 N.E.2d 1013 (N.Y. 1982).

DEC's and the gas industry's position that the state has "preempted the field" of natural gas drilling regulation and that communities may not use their zoning powers to prohibit natural gas drilling in any or all zoning districts⁸¹ has resulted in a conflict between the interest of municipalities in controlling industrial uses within their boundaries and the achievement of the state's energy goals as outlined in the OGSML.⁸² Over the last two years, dozens of communities have temporarily or permanently banned hydrofracking by adopting moratoria or amending their zoning laws to prohibit natural gas drilling, with more considering doing so.⁸³ The question of whether this is a permissible use of local authority has been challenged in two communities; the individual cases are discussed below in Part IV.⁸⁴

Section 23-0303(2) of the Environmental Conservation Law (ECL), New York's Oil, Gas and Solution Mining Law (OGSML), provides that

[t]he provisions of this article shall supersede all local laws or ordinances relating to the regulation of the oil, gas and solution mining industries; but shall not supersede

81. See REVISED dSGEIS, *supra* note 3, at 8-1; Remarks of Thomas West, *supra* note 71; see also Complaint at 6-7, *Anschutz Exploration Corp. v. Town of Dryden*, 940 N.Y.S.2d 458 (N.Y. App. Div. 2011), (No. 2011-0902), available at <http://cats.killcitizens.org/learnmore/drydenlawsuit.pdf>. For Anschutz's position, see *Anschutz Files Supreme Court Lawsuit to Overturn Town of Dryden Ban on Natural Gas Drilling*, ANSCHUTZ EXPLORATION CORPORATION, <http://www.anschutz-exploration.com/news/2011/091611-town-of-dryden.shtml> (last visited Feb. 17, 2012).

82. See N.Y. ENVTL. CONSERV. LAW § 23-0301 (McKinney 2012).

83. For example, temporary moratoria have been adopted by the Towns of Elbridge, DeWitt, Barrington, Milo, Wales, Skaneateles, Tully, Marcellus, Kirkland, and Andes. Bans have been enacted by the towns of Bethel, Cherry Valley, Jerusalem, Otsego, Middlefield, Ulysses, Dryden, Danby, Springfield, Tusten, Geneva, and Ithaca, and the Cities of Buffalo, Oneonta, and Syracuse. See *Local Actions Against Fracking*, FOOD&WATERWATCH, <http://www.foodandwaterwatch.org/water/fracking/fracking-action-center/local-action-documents/> (last visited Feb. 21, 2012) (scroll down to New York) (containing documents of the local measures passed against fracking); see also Lynn Sloneker, *Bethel Is Latest New York Town to Ban Fracking*, WGXC.ORG, Apr. 30, 2012, <http://newsroom.wgxc.org/archives/19139>; John Christensen, *Jerusalem Passes Fracking Ban, Asserts Home-Rule Zoning Authority*, THE CHRONICLE-EXPRESS (Feb. 17, 2012 2:25 PM) http://www.chronicle-express.com/news/x1331031785/Jerusalem-passes-fracking-ban-asserts-home-rule-zoning-authority?zc_p=0; Sarah Crean, *Will Community Bans on Hydrofracking Hold Up?*, GOTHAM GAZETTE (Dec. 18, 2011) <http://old.gothamgazette.com/article/environment/20111218/7/3659>; Tim Knauss, *Syracuse Bans Hydrofracking*, THE POST-STANDARD (Oct. 24, 2011) 3:33 PM, http://www.syracuse.com/news/index.ssf/2011/10/syracuse_bans_hydrofracking.html. Bans have been proposed in the towns of Highland, Bethel, and Lumberland. *Id.* Several counties, which do not have zoning authority, have acted to prohibit natural gas drilling on county-owned lands. *Id.*

84. *Anschutz Exploration Corp. v. Town of Dryden*, 940 N.Y.S.2d 458 (N.Y. App. Div. 2012); *Cooperstown Holstein Corp. v. Town of Middlefield*, 943 N.Y.S.2d 722 (N.Y. App. Div. 2011).

local government jurisdiction over local roads or the rights of local governments under the real property tax law.⁸⁵

The crux of the conflict involves the interpretation of the term “regulation.” If zoning laws, which regulate the use of land and the location of businesses but not the operations involved in the gas drilling business, are viewed as laws “relating to the regulation of” the industry, they are preempted by the language of ECL section 23-0303(2). If not, municipalities may use their zoning powers to identify appropriate locations in the community for such drilling, that is, if the community chooses to allow it at all.

The preemption clause in ECL § section 23-0303(2) has only been interpreted once before by a New York court. In the case of *Matter of Envirogas, Inc. v. Town of Kiantone*, now over thirty years old, the court struck down a local law that required gas drillers to post a \$2,500 compliance bond and pay a \$25 permit fee to the town before beginning drilling operations.⁸⁶ The court found that the law was preempted because it attempted to regulate gas drilling.⁸⁷ Although the town of Kiantone’s local law was technically a zoning law, both sides of the hydrofacking debate are now claiming this case supports their own. Plaintiffs argue that it stands for the proposition that all local zoning laws are preempted, and the defendants argue that it serves only as an example of the type of local regulation that is prohibited under the ECL.⁸⁸

The New York courts have prior experience looking at the distinction between zoning laws and laws that regulate business operations including mining. The state’s Mined Land Reclamation Law (MLRL) contained the following preemption provision, which is similar to the language found in the OGSML, cited above:

For the purposes stated herein, this title shall supersede all other state and local laws relating to the extractive mining industry; provided, however, that nothing in this title shall be construed to prevent any local government from: enacting local zoning ordinances or other local laws which impose stricter mined land reclamation standards or requirements than those found herein.⁸⁹

85. N.Y. ENVTL. CONSERV. LAW § 23-0303(2) (McKinney 2012).

86. *Envirogas, Inc. v. Town of Kiantone*, 447 N.Y.S.2d 221, 223 (N.Y. App. Div. 1982).

87. *See id.*

88. *See discussion infra* Part IV.

89. *Frew Run Gravel Prods., Inc. v. Town of Carroll*, 71 N.Y.2d 126, 129 (N.Y. 1987) (citing N.Y. ENVTL. CONSERV. LAW § 23-2703(2) (McKinney 2012) (amended 1991)).

The MLRL preempted local laws “relating to the extractive mining industry.”⁹⁰ Although the MLRL specifically permitted local laws regarding reclamation of land after mining at a site had ceased, it provided no express authority to adopt zoning laws to establish where a sand and gravel operation could locate.⁹¹

In *Frew Run Gravel Products, Inc. v. Town of Carroll*, the court found that the legislature, in enacting the MLRL, did not intend to preempt the provisions of a town zoning law that limited the areas of town where sand and gravel mines could be established.⁹² In making its determination, the court conducted a two part inquiry, looking first at the plain language of the statute and then to the purpose and intent of the statute.⁹³ Looking at the plain meaning of the phrase “relating to the extractive mining industry,” the court “[could not] interpret the phrase . . . as including the Town of Carroll Zoning Ordinance.”⁹⁴ The purpose of a zoning ordinance is to regulate land use, and in doing so, it “inevitably exerts incidental control over any of the particular uses or businesses which, like sand and gravel operations, may be allowed in some districts but not in others.”⁹⁵ The court found that this type of incidental control through zoning was “not the type of regulatory enactment relating to the ‘extractive mining industry’ which the Legislature could have envisioned as being within the prohibition of the statute.”⁹⁶ In so finding, the court recognized the difference between a zoning law and “[l]ocal regulations dealing with the actual operation and process of mining,” which would frustrate the statutory purpose of the MLRL’s standardized regulations.⁹⁷

The court also looked at the legislative history of the ECL’s enactment and found no express intention to preempt local zoning.⁹⁸ The court was hesitant to “drastically curtail” the town’s constitutional and statutory power to adopting zoning regulations in the absence of a clear intent to do so.⁹⁹ After *Frew Run* was decided, the legislature amended the MLRL to clarify that municipalities have authority to adopt local zoning laws that control the location of extractive

90. N.Y. ENVTL. CONSERV. LAW § 23-2703(2) (McKinney 2012).

91. *Frew Run Gravel Prods., Inc.*, 71 N.Y.2d 126 at 131-32.

92. *Id.* at 133.

93. *Id.* at 131.

94. *Id.*

95. *Id.*

96. *Id.*

97. *Id.* at 133.

98. *Id.* at 132.

99. *Id.* at 133.

mining.¹⁰⁰ The key issue that the courts will have to decide in pending litigation is whether the statutes regulating oil and gas mining are analogous to those regulating surface gravel mining.

III. Local Actions in Litigation: Issues and Arguments

Several towns in the Marcellus Shale region have taken affirmative action against hydrofracking in their communities by temporarily or permanently banning it within their borders.¹⁰¹ Proponents of hydrofracking have brought legal challenges against two such towns that have permanently banned it through zoning, challenging their ability to adopt such laws in light of the preemption provision of the ECL.

The Town of Dryden is located in Tompkins County, New York. On August 2, 2011, following the receipt of a petition signed by 1,594 individuals, the town amended its zoning ordinance to explicitly prohibit natural gas drilling.¹⁰² The ordinance added definitions for “natural gas” and “natural gas and/or petroleum exploration” and “natural gas exploration and/or petroleum production wastes” and then prohibited the “exploration for or extraction of natural gas and/or petroleum” anywhere in the town.¹⁰³ The law also purports to invalidate any “permit issued by any local, state or federal agency, commission or board for a use which would violate the prohibitions of” the ordinance.

The Town of Middlefield is a rural community surrounding the incorporated Village of Cooperstown in Otsego County, New York. Its predominant land uses are agriculture, forests, and low density residential.¹⁰⁴ Concerned about its water supply and its community character, the town hired a consultant to analyze the potential impacts of heavy industry on the town and then amended its comprehensive plan and zoning law to prohibit heavy industry throughout the

100. N.Y. ENVTL. CONSERV. LAW § 23-2703(2)(b) (McKinney 2012).

101. *See, e.g., Envirogas, Inc.*, 447 N.Y.S.2d 221 (N.Y. App. Div.) (holding that town’s efforts to stop oil and gas development via a zoning ordinance was null and void).

102. *See* TOWN OF DRYDEN, BOARD MEETING MINUTES 5-15 (Special Town Board Meeting, Aug. 2, 2011), available at http://dryden.ny.us/Board_Meeting_Minutes/TB/2011/TB2011-08-02.pdf.

103. *See* TOWN OF DRYDEN, NOTICE OF ADOPTION OF AMENDMENTS TO ZONING ORDINANCE 1 (Aug. 3, 2011), available at <http://drydensec.org/node/27>. Section 2104 provides that:

Id. at 2.

104. *See* GREENPLAN, INC., LAND USE ANALYSIS: HEAVY INDUSTRY AND OIL, GAS OR SOLUTION MINING AND DRILLING 4 (2011) (prepared for the Town Board of the Town of Middlefield), available at <http://www.otsego2000.org/documents/forwebsiteMiddlefieldLandUseAnalysis-Greenplan.pdf>.

town.¹⁰⁵ Heavy industry is broadly defined by its characteristics and includes “drilling of oil and gas wells” as well as chemical manufacturing, petroleum and coal processing, and steel manufacturing.¹⁰⁶ The local law to amend the town’s zoning was adopted on June 14, 2011.¹⁰⁷

The Town of Dryden’s law has been challenged by the Anschutz Exploration Corporation (Anschutz), a Colorado-based driller and developer of natural gas wells. Anschutz is the owner of oil and gas leases on approximately 22,200 acres in the Town of Dryden.¹⁰⁸ The Town of Middlefield’s law has been challenged by Cooperstown Holstein Corporation, a local dairy operation that has leased approximately 400 acres of its land for natural gas development.¹⁰⁹ The leases are currently held by Gastem USA, Inc., a subsidiary of a Canadian company that owns leases on approximately 34,400 acres in New York.¹¹⁰

On February 21, 2012, the Supreme Court Justice handling the *Dryden* case decided in the town’s favor by granting its motion for summary judgment, thereby upholding the town’s total ban on hydrofracking within its borders.¹¹¹ The court’s holding was straightforward: “In light of the similarities between the OGSML and the MLRL as it existed at the time of *Matter of Frew Run*, the court is constrained to follow that precedent in this case.”¹¹² The court found that the OGSML did not expressly preempt local zoning and that the town’s zoning amendment did not regulate gas production; rather, it regulated land use and not the operation of gas mining.

The court noted that “[n]one of the provisions of the OGSML address traditional land use concerns, such as traffic, noise or industry suitability for a particular community or neighborhood.”¹¹³ It cited other preemptive statutes with provisions requiring the relevant state agency to consider the traditional concerns of zoning in deciding

105. *See id.* at 2.

106. TOWN OF MIDDLEFIELD, N.Y., ZONING LAW art. II, § B(8) (2011), available at <http://middlefieldny.com/Documents%20Forms/Docs/Zoning%20Law%20061411%202011%20Final.pdf>.

107. *See id.*

108. Complaint, *Anschutz*, *supra* note 81, at 3.

109. Complaint at 1-2, *Cooperstown Holstein Corp. v. Town of Middlefield*, 943 N.Y.S.2d 722 (N.Y. App. Div. 2012), (No. 2011-0930), available at <http://catskillcitizens.org/learnmore/VsTownOfMiddlefield.pdf>.

110. *See* GASTEM, <http://www.gastem.ca/> (last visited Feb. 15, 2012).

111. *Anschutz*, 940 N.Y.S.2d 458.

112. *Id.* at 466.

113. *Id.* at 470.

whether a permit is to be issued. “Under this construction, local governments may exercise their powers to regulate land use to determine where within their borders gas drilling may or may not take place, while DEC regulates all technical operational matters on a consistent statewide basis in locations where operations are permitted by local law.”¹¹⁴ The provision of the local law that invalidated any other permits authorizing drilling was found invalid as preempted by the OGSML and was severed from the law leaving the other provisions in place.¹¹⁵

Three days later, on February 24, 2012, the Acting Supreme Court Justice in Otsego County issued a decision in the *Middlefield* case denying Holstein’s motion for summary judgment and granting summary judgment in favor of the Town of Middlefield, upholding the town’s zoning law which banned natural gas drilling.¹¹⁶ After thoroughly reviewing the legislative history of the OGSML, the court found no provision in it to support Holstein’s position, stating that

[N]either the plain reading of the statutory language nor the history of [the OGSML] would lead this court to conclude that the phrase ‘this article shall supersede all local laws or ordinances relating to the regulation of the oil, gas and solution mining industries’ was intended by the Legislature to abrogate the constitutional and statutory authority vested in local municipalities to enact legislation affecting land use.¹¹⁷

In the court’s analysis of the legislative history of the ECL, it found that the intention of the legislature was not to preempt the statutory authority vested in local municipalities to enact legislation affecting land use.¹¹⁸ Rather, the legislature’s intent was to impose uniform statewide oversight to ensure and promote efficient utilization of a state resource.¹¹⁹ The court analyzed the policy of the state at the time of original enactment of Article 3-A of the Environmental Conservation Law in 1963.¹²⁰ The court found that the provisions “fail to specifically address therein any land use issues which would otherwise be the subject of a local municipality’s zoning authority as an exercise of its police powers.”¹²¹ Rather, it found that the legislation focused

114. *Id.* at 471.

115. The court found that the provision could be severed without impairing the underlying purpose of the zoning amendment. *Id.* at 474.

116. *Cooperstown Holstein Corp.*, 943 N.Y.S.2d at 730.

117. *Id.* at 728.

118. *Id.*

119. *Id.* at 728-29.

120. *Id.* at 724-26.

121. *Id.* at 725.

the Department of Conservation's (now DEC) efforts on matters that were "regulatory in nature" such as spacing units, integration of oil and gas pools and fields, oil and gas leases, as well as the plugging of old wells.¹²²

Supporting this interpretation was "The Letter to the Governor on Legislation" from the Department of Audit and Control.¹²³ In its summary, the Department of Audit and Control stated that the legislation pertaining to the conservation of oil and gas was to promote efficient use and prohibit waste.¹²⁴ In addition, the court looked to the "Memorandum in Support" of the original 1963 legislation,¹²⁵ which stated that the purpose of the state's oversight was to maximize the utilization of oil and gas resources to prevent waste from inefficient and ineffective operations.¹²⁶

The 1978 amendments to Article 23, specifically Sec. 23-0301, clarified the difference between the regulation of and the promotion of state energy resources.¹²⁷ The amendments "effectively transferred the promotion of energy to the Energy Office while. . .continuing regulation of the oil, gas and solution mining industry with the Department of Environmental Conservation."¹²⁸ However, the court found that neither the original 1963 legislation nor the 1978 amendments made reference to the impact or preemption by the ECL on local municipal land use management.¹²⁹

In 1981, in reaction to the energy crisis, the State of New York amended various provisions of the environmental conservation law.¹³⁰ The purpose of the amendments was to provide the Department of Conservation with funding in order to expand its regulatory program as well as enhanced civil and criminal penalties.¹³¹ It was in these amendments that the supersession clause was inserted.¹³² The court found that the regulation component, which had been turned over to DEC, dealt with the "activity of the industry."¹³³ The activity of the industry is

122. *Id.*

123. *Id.* at (This letter is dated Apr. 23, 1963).

124. *Id.*

125. *Id.* at 725-26.

126. *Id.* at 726

127. *Id.* at 726-27.

128. *Id.* at 726.

129. *Id.* at 727.

130. *Id.*

131. *Id.* at 727-28.

132. *Id.* at 728.

133. *Id.*

limited to the method and manner of oil and gas drilling.¹³⁴ The court concluded its analysis by stating that “[t]he state maintains the ‘how’ of such procedures while the municipalities maintain control over the ‘where’ of such exploration.”¹³⁵

The court also relied on case law interpreting the “strikingly similar” provision of the MLRL, which found that “in the absence of a clear legislative intent to preempt local control over land use, the [MLRL] could not be read as preempting local zoning authority.”¹³⁶

While the first round went to the municipalities and opponents of hydrofracking, it will be some time before the issue of whether a municipality can regulate the “where” of hydrofracking through zoning is finally resolved in the appellate courts. A Notice of Appeal has been filed in both the *Dryden* and *Middlefield* cases.¹³⁷

IV. Local Control: Actions Localities Can Take

If, after full appellate review of their cases, the towns of Dryden and Middlefield ultimately win, they will have established that the location and land use impacts of hydrofracking projects may be regulated by local zoning laws. Such laws are, nonetheless, vulnerable. If this catalyzes a host of local laws that effect complete bans on hydrofracking, the political balance may be tipped in favor of the industry and result in legislative action similar to Act 13 in Pennsylvania,¹³⁸ which superseded all local regulation. There may be other, more successful attacks in courts raising regulatory taking and due process arguments. Given these possibilities as well as the possibility of unfavorable action by the appellate courts, localities need to consider less stringent actions that they can take to protect themselves. They have many options.

A. Comprehensive Planning

All zoning and other land use regulations in New York must conform to the comprehensive plan.¹³⁹ **Localities interested in adopting effec-**

134. *Id.*

135. *Id.* at 729.

136. *Id.*

137. Notice of Appeal, *Anschutz Exploration Corp. v. Town of Dryden*, 940 N.Y.S.2d 458 (N.Y. App. Div. 2012) (No. 2011-0902), available at <http://drydensc.org/sites/default/files/DrydenNoticeofAppeal.pdf>; Notice of Appeal, *Cooperstown Holstein Corp. v. Town of Middlefield*, 943 N.Y.S.2d 722 (N.Y. App. Div. 2011) (No. 2011-0930), available at <http://www.westfirmlaw.com/flare/MiddlefieldNoticeofAppeal.pdf>.

138. See discussion *infra* Part II.D; *supra* note 29 and accompanying text.

139. N.Y. TOWN LAW § 272-a(2)(a) (McKinney 2012); N.Y. VILLAGE LAW § 7-722(2)(a) (McKinney 2012).

tive and legally sustainable actions to control hydrofracking should add a component to their comprehensive plans regarding gas drilling, its impact on their communities, and the goals, objectives, strategies, and implementation measures they plan to adopt to control those impacts and to maximize the economic benefits of hydrofracking.

If these towns ultimately fail in the appellate courts, it is still a good idea for them to adopt a hydrofracking component of their comprehensive plan. The development of the plan component may bring a community to consensus regarding the benefits and dangers of hydrofracking and support various non-regulatory actions it can then take. The OGSML affirmatively endorses local governments' jurisdiction over their roads, for example, opening the door to effective control of this critical impact of hydrofracking. An aggressive road control ordinance will be bolstered by an adopted comprehensive plan. Finally, a comprehensive plan component on the topic may influence DEC in the issuance of permits and bring the locality into its decision making process.¹⁴⁰

A hydrofracking or heavy industry component of the comprehensive plan can discuss the adverse impacts on the community's character and environment arising from these types of industries. With respect to hydrofracking much of this homework has been done by DEC and towns can now draw on the risks discussed in the Revised Draft Supplemental Generic Environmental Impact Statement (Revised dSGEIS). That same document can guide communities in listing measures that will mitigate the adverse impacts of gas drilling. If the courts determine that localities have the power to adopt land use regulations, these mitigation measures can be included in the component as strategies to be achieved through land use regulation, bringing such future regulations into conformance with the comprehensive plan. Other protective initiatives, such as those discussed below, can be listed in the comprehensive plan amendment as effective strategies to be adopted by the community.

Depending on the resources available to the community, its plan can inventory portions of the community that are particularly vulnerable to the adverse impacts of hydrofracking and declare those areas off limits or identify them as areas requiring special environmental impact review prior to location of a well. Communities that simply ban hydrofracking town-wide without this kind of analysis risk losing substan-

140. See REVISED dSGEIS, *supra* note 3, at Executive Summary, 26-27.

tive due process challenges brought by regulated landowners and drilling companies.

B. Local Land Use Regulation

If the judiciary follows the *Dryden* and *Middlefield* decisions and determines that localities have the power to regulate the location of hydrofracking wells, then communities can do three things: (1) amend their zoning ordinances to make certain neighborhoods or zoning districts off limits for hydrofracking; (2) allow such drilling only by special permits subject to a full list of mitigation requirements regarding matters within the ambit of zoning regulations; or, (3) specify which zoning districts permit gas drilling and adopt appropriate standards that such land uses must meet.

C. Road Regulation

The OGSML clearly allows localities to adopt road protection and safety standards for heavy trucks and other vehicles used in hydrofracking and other similarly high intensity enterprises.¹⁴¹ Drilling companies can be required to apply for and receive a road permit which can be renewable periodically, based on satisfactory compliance with the permit system's requirements. Localities can: (1) adopt a road permit system for all vehicles involved in drilling and similar ventures, requiring well owners and operators to apply for a road permit, report annually, and pay a fee; (2) require annual reports regarding the use or abuse of roads, mitigation of adverse impacts, lists of costs of road repair, and restoration of environmental damage; (3) create a road inventory system where road conditions are assessed, damage done by regulated trucks is tracked and calculated, and charges for road repairs are assessed; and, (4) establish truck routes and adopt road rules.¹⁴²

141. N.Y. ENVTL. CONSERV. LAW § 23-0303(2) (McKinney 2012). In addition, a municipality may designate truck routes "upon which all trucks, tractors and tractor-trailer combinations having a total gross weight in excess of ten thousand pounds are permitted to travel and operate and excluding such vehicles and combinations from all highways except those which constitute such truck route system." N.Y. VEH. & TRAF. LAW §§ 1640(a)(10), 1660(a)(10) (McKinney 2012).

142. Under New York's Vehicle and Traffic Law (VTL), municipalities have historically had several options for protecting their roads including the creation of truck routes, the ability to prohibit trucks from designated roadways, regulation of traffic through traffic control signals, and regulation of speed limits. *See id.* §§ 1640, 1660. The VTL is a "general law" of the state and a municipality may not enact a local law which conflicts with any provision of the VTL through its home rule powers. *See id.* §§ 1600, 1604; *see also* 1980 N.Y. Op. Att'y Gen. (Inf.) 209 (N.Y.A.G.). While the legality of municipalities adopting innovative road permit laws or requirements is not clear in these circumstances, at the time of publishing, such techniques have yet to

Through road regulation, municipalities may gain leverage over gas drilling, even if their zoning power is deemed preempted. For example, a town may temporarily exclude any vehicle with a gross weight in excess of four tons over certain roads when “in its opinion such highway would be materially injured by the operation of any such vehicle thereon.”¹⁴³ The Attorney General has opined that a town may also permanently exclude vehicles from highways.¹⁴⁴

D. *Collaboration with DEC*

In the Executive Summary of the dSGEIS, DEC indicates that the Department will give notice to the affected locality before it issues a gas drilling permit and require the applicant “to identify whether the proposed location of the well pad, or any other activity under the jurisdiction of the Department, conflicts with local land use laws or regulations, plans, or policies.”¹⁴⁵ Accordingly, the project sponsor will “be required to identify whether the well pad is located in an area where the affected community has adopted a comprehensive plan or other local land use plan and whether the proposed action is inconsistent with such plan(s).”¹⁴⁶ If the sponsor indicates an inconsistency or the potentially impacted government informs the DEC of an inconsistency, “the Department intends to request additional information in the permit application process to determine whether this inconsistency raises significant adverse environmental impacts that have not been addressed in the dSGEIS.”¹⁴⁷ Thus, by adopting a comprehensive plan component along the lines suggested above, local governments can achieve useful leverage over gas drillers in their communities.

E. *Adoption of a Host Community Agreement*

The comprehensive plan can call for the creation of a Host Community Agreement (HCA) and invite all gas companies that receive a DEC permit to drill locally to sign the agreement. The HCA can reference the adverse impacts that the community wishes to avoid, the measures

be challenged. *See generally* Albany Area Builders Ass’n v. Town of Guilderland, 74 N.Y.S.2d 372 (N.Y. 1989) (holding that a town’s local law was preempted by the New York State Highway Law, as “the State Legislature has enacted a comprehensive and detailed regulatory scheme in the field of highway funding, preempting local legislation on that subject).

143. N.Y. VEH. & TRAF. LAW § 1660(a)(11).

144. 1980 N.Y. Op. Att’y Gen. (Inf.) 209 (N.Y.A.G).

145. REVISED dSGEIS, *supra* note 3, at Executive Summary, 26.

146. *Id.*

147. *Id.* at 26-27.

drilling companies should take to mitigate such impacts, and establish local initiatives that communities request drillers to take.

Tied to the comprehensive plan, this agreement might be useful in negotiating stricter standards when drillers apply for DEC permits. The leverage that communities enjoy with respect to road regulation might also move drilling companies to sign. Where the residents of the community are brought together through the process of adopting a comprehensive plan component and in drafting the HCA, they may develop a local consensus regarding how drilling should be permitted, subject to reasonable restrictions that they identify. Even land-owners who wish to lease their land to gas drillers might be persuaded to include a provision in their leases that the gas companies must sign and comply with the HCA.

F. *Other Negotiated Agreements*

In Utah, there is a natural gas development project where the local stakeholders, a regional wilderness organization, the gas company, and two federal agencies have negotiated a settlement of their differences over gas drilling.¹⁴⁸ Anadarko Petroleum Corporation is developing nearly 163,000 acres, with 3,675 new natural gas wells to be built in a ten year period.¹⁴⁹ The development is on land owned by the Bureau of Land Management (BLM), which negotiated pollution reduction strategies for this development with EPA. In addition to this agreement, the Anadarko, BLM, and the Southern Utah Wilderness Alliance collaborated on the actual siting of the wells, roads, pipelines, and electrical power lines. This inclusive process produced “a solution that protects the White River proposed wilderness area and regional air quality, while allowing the drilling project to proceed.”¹⁵⁰ By proactively seeking stakeholder involvement, Anadarko was able to “move forward without lengthy [legal and political] challenges.”¹⁵¹

Such negotiated settlements can be induced, to a degree, by state regulation itself. In 2011, for example, the New York State legislature adopted a statutory utility siting system that arrogates much of the power to the state, without excluding local governments and stake-

148. Scott Streater, *Utah Drilling Project Earns Praise from Enviros*, ENERGY-WIRE (Apr. 9, 2012), available at <http://investorvillage.com/groups.asp?mb=16589&mn=2883&pt=msg&mid=11624159>.

149. *Id.*

150. *Id.* (quoting Steve Bloch, Energy Program Dir., S. Utah Wilderness Alliance).

151. *Id.*

holders from influencing the official permit outcome.¹⁵² This law reauthorized and revised Article X of the Public Service Law, allowing an electric generation siting board, which is to include two ad hoc members who are residents of the affected community, to review and approve the siting of electric utility generators of twenty-five Megawatts or greater.¹⁵³ This board is empowered to override local land use laws that it believes are unreasonably burdensome.¹⁵⁴ Prior to the adoption of this law and following the expiration of a previous version of Article X, localities governed this land use and often opposed or significantly delayed the approval of generation plants vitally needed by the state's power grid. In establishing a state-controlled siting system, the legislature allowed for the input of the affected locality and local stakeholders.¹⁵⁵ In addition to requiring local residents to sit on the siting board, the revised Article X requires applicants to set up a fund that will enable affected local governments, environmental groups, and the community at large to hire experts, lawyers, and other consultants to participate in the process of creating a scope of review for the proposed utility.¹⁵⁶ Applicants are encouraged to enter into agreements with these parties regarding the scope of review and a hearing examiner is appointed to resolve any disputes that arise over the scoping.¹⁵⁷ While it does not impose a collaborative decision-making process on affected agencies, governments, and private actors, this legislative approach sets the table and provides significant resources so that one can occur.

V. Who Decides?

The New York battle tests our federal system's decision-making process regarding critical issues such as energy production and the protection of the environment and natural resources. If the *Dryden* and *Middlefield* cases are lost by the towns and Congress and EPA do not step in with more productive procedures, these issues will be decided by a single agency of the State of New York. This will be replicated in other states where there are significant shale gas reserves. Without some method of integrating all three levels of government, the resour-

152. N.Y. PUB. SERV. LAW §§ 160-173 (McKinney 2012).

153. *Id.* at § 162.

154. *Id.* at § 168(3)(e).

155. *Id.* at § 166(j), (k).

156. *Id.* at § 163(4)(a).

157. *Id.* at § 163(5).

ces of the federal and local governments will not shape the outcome regarding issues of critical importance to their federal and local constituencies. If the towns ultimately win, the legislature will be under pressure to clarify and perhaps limit local jurisdiction over a resource whose exploitation raises legitimate state and federal issues.

Attorneys for the involved stakeholders, in the interim, are mired down by winner-take-all advocacy in a dispute muddied by conflicting claims and data. The skills of lawyers in issue spotting, fact gathering and analysis, creating productive negotiations for the resolution of complex matters, and framing agreements are not being used fully to influence the outcome of this raucous debate. The sub-optimal process being employed to decide the future of hydrofracking in the Marcellus Shale region should cause lawmakers to revisit and rethink how such critical issues are decided.