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Symposium: The Law and Policy of Hydraulic Fracturing: Addressing the Issues of the Natural Gas Boom - Introduction

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— Symposium —

The Law and Policy of Hydraulic Fracturing: Addressing the Issues of the Natural Gas Boom

INTRODUCTION

Jonathan L. Entin[†]

For at least four decades, energy and the environment have occupied important places in American policy and legal debates.¹ At one time nuclear power played a central role in the energy field.² More recently, advances in drilling technology and changes in energy economics have made the potential for obtaining oil and gas from shale formations around the United States increasingly attractive while

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1. *See, e.g.*, *Scenic Hudson Pres. Conference v. Fed. Power Comm'n*, 354 F.2d 608 (2d Cir. 1965) (holding that the Federal Power Commission, the predecessor of the Federal Energy Regulatory Commission, must consider preservation of natural beauty, marine life, and historic sites in licensing hydroelectric facilities).
2. Nuclear power issues were vigorously contested in the judicial arena. *See, e.g.*, *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87 (1983) (requiring deference to agency determinations relating to technical aspects of nuclear power); *Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519 (1978) (rejecting judicial efforts to impose more elaborate procedural requirements than required by statute for licensing of nuclear power plants); *Calvert Cliffs' Coordinating Comm., Inc. v. U.S. Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971) (holding that agency rules relating to nuclear power plants do not comply with the National Environmental Policy Act); *see also Pac. Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm'n*, 461 U.S. 190 (1983) (holding that the Atomic Energy Act preempts state regulation of nuclear safety but not of the economic aspects of nuclear power plants).

provoking widespread controversy about environmental and health effects.³

Much of the debate about hydraulic fracturing (popularly referred to as “fracking”) has generated more heat than light. In an effort to illuminate the many issues raised by these recent developments, the *Case Western Reserve Law Review* sponsored a symposium on “The Law and Policy of Hydraulic Fracturing: Addressing the Issues of the Natural Gas Boom” in November 2012. This issue of the *Review* contains papers presented at that symposium.

The first piece is an essay by Thomas W. Merrill, the Charles Evans Hughes Professor at Columbia Law School and the symposium keynoter.⁴ Professor Merrill explores four questions that set the tone for what follows. First, why did fracking emerge in this country rather than elsewhere in the world? He suggests that the principal explanation relates to the decentralization of the energy market here compared with the situation in many other nations. Second, to what extent does fracking present novel issues that could justify changes in our existing system of environmental regulation? Here he focuses mainly on water quality. Third, what kind of regulatory regime should be used to address threats to water quality that might be associated with fracking? His basic proposal draws on the common law of torts, supplemented by some additional features such as presumptions relating to causation and information-forcing legislation. Fourth, how should individuals concerned about climate change regard the emergence of fracking? Professor Merrill suggests that, on balance, fracking can have salutary effects on the environment, particularly by reducing the role of coal in energy production.

The rest of the articles revolve around four main themes. One of those themes relates to who decides whether and how to engage in hydraulic fracturing. John Nolon and Steven Gavin note the limited scope of federal regulation in this area and focus primarily on the tensions between state and local government oversight.⁵ Analyzing the

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3. Recent developments also have raised issues relating to economic policy. For example, Ohio’s Republican Governor John R. Kasich proposed to raise the Buckeye State’s severance tax as part of a comprehensive plan to lower personal and small business income taxes and the state sales tax rate. STATE OF OHIO, THE EXECUTIVE BUDGET: FISCAL YEARS 2014–2015, at i-ii, B-6 to -7, B-21, D-553 (2013). The Republican-controlled House of Representatives did not include the governor’s proposed severance tax increase in its budget bill. See Am. Sub. H.B. 59, 130th Gen. Assemb., Reg. Sess. (Ohio 2013) (retaining the existing severance tax rates provided in OHIO REV. CODE ANN. § 5749.02).
 4. Thomas W. Merrill, *Four Questions About Fracking*, 63 CASE W. RES. L. REV. 971 (2013).
 5. John R. Nolon & Steven E. Gavin, *Hydrofracking: State Preemption, Local Power, and Cooperative Governance*, 63 CASE W. RES. L. REV. 995 (2013).

contrasting approaches of four states that host the massive Marcellus Shale formation (New York, Pennsylvania, West Virginia, and Ohio), they propose that much of the current debate over the proper locus of regulation misses the mark. Instead of trying to decide which level of government should have exclusive jurisdiction, these authors advocate a more cooperative regime of regulation in which both state and local authorities can play appropriate roles.

In contrast to Nolon and Gavin, who emphasize the role of government, and Merrill, who draws on the common law of torts, the next paper looks to a distinctive theory of property. Peter Gerhart and Robert Cheren examine the promise of private agreements subject to judicial oversight that further a paradigm of shared property.⁶ Rejecting the models of private property on the one hand and commons property on the other, these authors contend that their model is consistent with the conventional common law approach to subsurface resource pools but offers a more persuasive justification than the traditional approaches. This paper also shares an analytical perspective with the previous one, which emphasizes the importance of concurrent authority over fracking; the pieces differ in that Nolon and Gavin address the role of different levels of government whereas Gerhart and Cheren examine the role of private actors.

The last paper on this broad theme surveys various regulatory approaches that states have taken. Christopher Kulander first summarizes many of the new state laws that address specific aspects of hydraulic fracturing and then looks at a broad range of specific state regulatory regimes.⁷ Kulander analyzes the systems in seven states from different parts of the country, some of which (like Texas) have a well-developed body of oil and gas law and some of which (like Idaho and Maryland) do not. Professor Kulander concludes by casting a skeptical eye at proposals for a larger role for federal regulation, emphasizing the advantages of allowing states to adopt the regime that seems best suited to local conditions.

This serves as a fitting transition to the second broad theme of the articles in this issue, how to fit hydraulic fracturing into existing regulatory frameworks. The next two papers examine this important question. Kalyani Robbins emphasizes that fracking can significantly disrupt the ecosystems in which many species of wildlife live, from forests to lakes, streams, and rivers.⁸ This in turn can trigger the

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6. Peter M. Gerhart & Robert D. Cheren, *Recognizing the Shared Ownership of Subsurface Resource Pools*, 63 CASE W. RES. L. REV. 1041 (2013).
 7. Christopher S. Kulander, *Shale Oil and Gas State Regulatory Issues and Trends*, 63 CASE W. RES. L. REV. 1101 (2013).
 8. Kalyani Robbins, *Awakening the Slumbering Giant: How Horizontal Drilling Technology Brought the Endangered Species Act to Bear on Hydraulic Fracturing*, 63 CASE W. RES. L. REV. 1143 (2013).

provisions of the Endangered Species Act,⁹ which unlike other environmental statutes contains few if any exceptions. Professor Robbins explores a wide range of potential violations of the Endangered Species Act and their implications for the expansion of fracking.

The other piece that seeks to place hydraulic fracturing into existing regulatory frameworks is by Nicholas Schroeck and Stephanie Karisny. These authors emphasize provisions applicable to the Great Lakes that might have implications for the regulation of fracking in the region: the Great Lakes–St. Lawrence River Basin Sustainable Water Resources Agreement, which was negotiated by the eight Great Lakes states in the United States and the two Great Lakes provinces in Canada, as well as the Great Lakes–St. Lawrence River Basin Water Resources Compact, which was endorsed by the legislatures of the Great Lakes states and approved by Congress.¹⁰ In particular, provisions that restrict new and increased diversions of water from the Great Lakes could serve as the predicate for restrictions on fracking.¹¹ Further, Schroeck and Karisny propose new binational regulations to supplement the provisions of the Compact.

Our third broad theme picks up on Professor Merrill's second question, about the risks of hydraulic fracturing. Joseph Tomain takes a less sanguine view of the risks and a more pessimistic view of the implications of fracking for the development of clean energy.¹² In addition to the prospect of water pollution that Merrill emphasized, Tomain notes the threats of air pollution and community disruption. Indeed, he warns that the growth of the shale industry could reinvigorate the dominant hydrocarbon-based energy system at the expense of less polluting energy sources. Tomain concludes with a series of suggested regulatory initiatives at the federal and state levels.

Elizabeth Burleson also casts a skeptical eye on fracking. She emphasizes that in many places the combination of hydraulic fracturing and horizontal drilling results in the emission of large quantities of methane, which contributes to the problem of greenhouse gas emissions and aggravates the problem of climate change.¹³ To

9. 16 U.S.C. §§ 1531–1544 (2006).

10. Nicholas Schroeck & Stephanie Karisny, *Hydraulic Fracturing and Water Management in the Great Lakes*, 63 CASE W. RES. L. REV. 1167 (2013).

11. This is not the first discussion of the Compact's provisions on diversion of Great Lakes water to appear in these pages. See Jeffrey S. Dornbos, Note, *Capping the Bottle on Uncertainty: Closing the Information Loophole in the Great Lakes–St. Lawrence River Basin Water Resources Compact*, 60 CASE W. RES. L. REV. 1211 (2010).

12. Joseph P. Tomain, *Shale Gas and Clean Energy Policy*, 63 CASE W. RES. L. REV. 1187 (2013).

13. Elizabeth Burleson, *Climate Change and Natural Gas Dynamic Governance*, 63 CASE W. RES. L. REV. 1217 (2013).

address this concern, Burleson emphasizes the potential for ameliorating the consequences of methane emissions through a combination of monitoring, technology-forcing measures, cap-and-trade mechanisms, and other devices that could enhance the prospects for mitigating climate change.

The last paper exploring the risks of fracking comes from Heidi Gorovitz Robertson, who analyzes the implications of the 2010 *Deepwater Horizon* oil spill in the Gulf of Mexico for regulations of hydraulic fracturing.¹⁴ She focuses on three principal aspects. First, she emphasizes the inherent conflicts of interest that undermined the effectiveness of the Minerals Management Service of the U.S. Department of the Interior. This agency had primary responsibility for regulating offshore drilling but also was in charge of leasing offshore drilling locations.¹⁵ Second, regulators gave insufficient attention to knowledge gaps in understanding the risks of offshore drilling and did not adequately factor known risks into their approach. Third, authorities were not adequately prepared to address emergencies that might arise from the use of this technology.

The final piece in the symposium focuses on economic issues. Timothy Fitzgerald addresses three different aspects of this subject: the extent to which the new technology enables substantial productivity increases, the growth in energy supply arising from this technology, and the tradeoffs between increased energy production and environmental quality.¹⁶ He emphasizes the continuing uncertainties in our knowledge that prevent us from accurately assessing the costs and benefits of the new technology.

This remarkable set of papers and the symposium itself were the result of initiatives undertaken by the editors of the *Law Review*. Particular credit belongs to Paul Janowicz, the symposium editor, and Benjamin Ristau, the editor-in-chief. As faculty advisor to the *Review*, I am delighted to have this opportunity to honor their extraordinary work on this project and to recognize the remarkable work of the editors of Volume 63 throughout their tenure on the board.

14. Heidi Gorovitz Robertson, *Applying Some Lessons from the Gulf Oil Spill to Hydraulic Fracturing*, 63 CASE W. RES. L. REV. 1279 (2013).

15. This conflict is reminiscent of the tensions between the Secretary of Transportation's role in promoting highway construction and preserving parkland. *Cf.* Citizens to Pres. Overton Park v. Volpe, 401 U.S. 402, 413 (1971) ("If the statutes [forbidding use of parklands for highway construction unless 'no feasible and prudent alternative' exists] are to have any meaning, the Secretary cannot approve the destruction of parkland unless he finds that alternative routes present unique problems.").

16. Timothy Fitzgerald, *Frackonomics: Some Economics of Hydraulic Fracturing*, 63 CASE W. RES. L. REV. 1337 (2013).



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