

A BRIEF HISTORY OF ENERGY LAW IN UNITED STATES LAW SCHOOLS: AN INTRODUCTION TO THE SYMPOSIUM

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“What is energy law?” That’s the question I often hear after I tell people I’m teaching the course. Today the importance of energy seems self-evident, but classes in the subject have had an up-and-down history in U.S. law schools that may have led to confusion about its content, so a brief history of its role in law schools is appropriate.

I. THE PIONEERS

The first wave of interest in energy law followed the “oil shocks” of the 1970s. In 1973 and again in 1979, oil prices rose precipitously in response to events in the Middle East. The impact rippled throughout the economy, causing many users of oil and its derivatives to change their behavior. Some consumers switched to alternative sources of energy, thereby creating price pressure on those sources, and some found ways to reduce their energy consumption, forcing the realization that the demand for energy was more flexible than previously believed.¹

Every president since Truman had called for adoption of a national energy policy—a call never adequately answered.² However, these calls catalyzed law professors’ awareness that the various sources, regulations, and uses of energy, each of which had found its own little niche in the legal curriculum, were closely interrelated. Oil and gas law had accumulated a large body of precedent and was taught extensively in those schools located in states with oil and gas production; state regulation of natural gas and electricity occupied courses in public utility law and regulated industries; federal administrative law courses included coverage of the Federal Power Commission; coal was typically dealt with in courses on mineral law or natural resources law; and the burgeoning field of environmental law involved many controversies about energy facilities.³

1. THOMAS L. FRIEDMAN, *HOT, FLAT AND CROWDED* 14 (2008).

2. Peter D. Blair, *U.S. Energy Policy Perspectives for the 1990s*, in *MAKING NATIONAL ENERGY POLICY* 7, 9-13, Hans Landsberg, ed., (1993).

3. FRED BOSSELMAN ET AL., *ENERGY, ECONOMICS AND THE ENVIRONMENT* 2-4 (3d. ed. 2010).

Some law professors saw that the interaction among all of these legal fields might be worth studying under the heading of “Energy Law.” Professor Donald Zillman wrote a pioneering energy law casebook for Foundation Press in 1982.⁴ Professor Joseph Tomain wrote West Publishing’s first handbook on Energy Law⁵ and, together with Professor James Hickey, put out a casebook in 1989.⁶

The bar also spread its net wider. The Federal Energy Bar Association dropped the word Federal from its title and attracted lawyers beyond those who practiced before federal agencies.⁷ Donald Muchow and William Mogel published a treatise on Energy Law and Transactions in 1990.⁸

II. THE HIATUS

By the late 1980s, however, the interest in energy law had already begun to wane. Gasoline became cheaper as oil prices dropped in response to the Saudis’ increased production.⁹ President Reagan’s removal of the President Carter’s solar panels from the White House symbolized a growing belief that if there had ever been a crisis, it was over.¹⁰ Economic boom times saw the rise of the SUV as a fashion statement.¹¹

By the time Professor Jim Rossi and I began teaching energy law in the late 1990s, the libraries were full of energy journals that had stopped printing and dusty books that were little used. But as public awareness reawakened to the need for an integrated approach to energy, the work of the pioneer authors of the 1980s provided an indispensable starting point for a new look at the field of U.S. energy law.

Despite many changes in the energy business, most of the issues that dominated energy law in the 1980s are still being debated. Experts still argue about whether or when “peak oil” supply will be reached.¹² Regional rivalries still add a key political element to Congressional energy debates.¹³

4. DONALD N. ZILLMAN AND LAURENCE H. LATTMAN, *ENERGY LAW* (1983).

5. JOSEPH P. TOMAIN, *ENERGY LAW IN A NUTSHELL* (1981). The current edition is JOSEPH P. TOMAIN AND RICHARD D. CUDAHY, *ENERGY LAW IN A NUTSHELL* (2004).

6. JOSEPH P. TOMAIN AND JAMES E. HICKEY, JR., *ENERGY LAW AND POLICY* (1989).

7. *New Name, Vision, and Values Backgrounder*, ENERGY BAR ASS’N, <http://www.eba-net.org/backgrounder.php> (last visited Jan. 11, 2011).

8. DAVID J. MUCHOW AND WILLIAM A. MOGEL, *ENERGY LAW AND TRANSACTIONS*. (1990).

9. DANIEL YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY AND POWER* 718-21 (1993).

10. FRIEDMAN, *supra* note 1, at 15.

11. KEITH BRADSHER, *HIGH AND MIGHTY: THE DANGEROUS RISE OF THE SUV* (2002).

12. VACLAV SMIL, *ENERGY AT THE CROSSROADS: GLOBAL PERSPECTIVES AND UNCERTAINTIES* 184-94 (2003).

13. *See e.g.*, Arnold W. Reitze, Jr., *Biofuels: Snake Oil for the Twenty-First Century*, 87 OR. L. REV. 1183 (2008).

No consensus has developed about the desirable extent and content of economic regulation of energy¹⁴—deregulation has produced some triumphs and some disasters.¹⁵ Industry still thinks environmental regulations exceed reasonable needs while environmental groups continue to believe that industry dominates the regulatory process.¹⁶ “Not in my backyard” remains a powerful deterrent to new projects.¹⁷

III. GEOPOLITICS, TECHNOLOGY AND SCALE

Since the 1980s, however, the energy business has evolved in a number of important ways. These changes increase the importance of many legal issues, particularly those relating to geopolitics, technology, and scale. International relations dominate energy law today even more than during the first oil shocks.¹⁸ Emerging national powerhouses with growing populations have sharply ramped up energy demand causing extreme volatility in the oil market¹⁹ that reflects the needs of China and other Asian nations.²⁰ Growth in the tanker trade in liquefied natural gas is creating an international market for gas.²¹ European nations are trying to overcome national traditions and build a common energy policy.²² Nations outside the Middle East are now producing quantities of oil and gas that diminish (but do not displace) the importance of Middle East sources.²³

New or improved technology has made available resources that were unused in the previous century. Hydraulic fracturing is opening up extensive shale gas reserves.²⁴ Drilling for oil is taking place in deeper waters

14. Jacqueline Lang Weaver, *Can Energy Markets Be Trusted? The Effect of the Rise and Fall of Enron on Energy Markets*, 1 HOUSTON BUS. & TAX L. J. 131-140 (2004).

15. PETER FOX-PENNER, SMART POWER: CLIMATE CHANGE, THE SMART GRID, AND THE FUTURE OF ELECTRIC UTILITIES 9-20 (2010).

16. BOSSELMAN ET. AL., *supra* note 3, at 17-18.

17. SPENCER ABRAHAM, LIGHTS OUT: TEN MYTHS ABOUT (AND REAL SOLUTIONS TO) AMERICA’S ENERGY CRISIS 214-223 (2010).

18. JAMES E. HICKEY ET AL., ENERGY LAW AND POLICY FOR THE 21ST CENTURY 4.3 - 4.10 (2000).

19. ABRAHAM, *supra* note 17, at 91-94 (2010).

20. YI-MING WEI ET AL., ENERGY ECONOMICS: MODELING AND EMPIRICAL ANALYSIS IN CHINA 13-18 (2010).

21. ABRAHAM, *supra* note 17, at 110-113.

22. EUROPEAN COMMISSION, ENERGY: COMMISSION PRESENTS ITS NEW STRATEGY TOWARDS 2020 (November, 2010), <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1492&format=HTML&aged=0&language=en&guiLanguage=en> (last visited Jan. 11, 2011).

23. *International Energy Statistics: Petroleum (2010)*, ENERGY INFORMATION ADMINISTRATION, <http://tonto.eia.doe.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&pid=53&aid=1> (last visited Jan. 11, 2011).

24. Press Release, Energy Information Administration, Shale Gas Development Drives U.S. Natural Gas Proved Reserves to Highest Level Since 1971 (Nov. 30, 2010), *available at* <http://www.eia.gov/neic/press/press349.html>.

than would have been foreseen in the 1980s.²⁵ Advances in electric transmission are beginning to improve reliability and efficiency,²⁶ and electric companies are eager to expand their involvement in their customers' use of electricity by automating the distribution network.²⁷ Small-scale generation sources near markets are providing a small but increasing share of power,²⁸ and better batteries have stimulated interest in hybrid and all-electric motor vehicles.²⁹

In addition, the scale of energy operations has increased. National oil companies control eighty percent of the world's oil reserves.³⁰ Huge strip mining machines produce most of America's coal.³¹ Individual windmills have multiplied into large windfarms.³² China is planning nuclear power plants by the dozen.³³ Correspondingly, the scale of energy's environmental impact has expanded beyond problems of existing local pollution to include long-term issues such as food supplies, climate, acid rain, biodiversity, and the sustainability of energy resources.³⁴

IV. SCOPE OF THIS ISSUE

In putting together this issue, we tried to present a few illustrations of the wide range of controversies over geopolitics, technology, and scale that characterize energy law in the coming decade. Only a sample could be included, but we hope that it will give the reader an idea of the broad scope of factors that must be integrated into any analysis of energy law.

Any discussion of energy globalization must focus on China. Professor Joel B. Eisen, a prominent analyst of Chinese energy law, takes issue with the view that the United States and China are locked in a battle to control the development and manufacture of renewable energy technology.

25. Toni Johnson, U.S. Deepwater Drilling's Future, Council on Foreign Relations (January 7, 2011), COUNCIL ON FOREIGN RELATIONS, *available at* http://www.cfr.org/publication/22204/us_deepwater_drillings_future.html.

26. JANE BROX, BRILLIANT: THE EVOLUTION OF ARTIFICIAL LIGHT 258-62 (2010).

27. FOX-PENNER, *supra* note 15, at 35-36.

28. BOSSELMAN ET AL., *supra* note 3, at 926-30.

29. IAIN CARSON AND VIJAY V. VAITHEESWARAN, ZOOM: THE GLOBAL RACE TO FUEL THE CAR OF THE FUTURE 268-278 (2007).

30. BOSSELMAN ET AL., *supra* note 3, at 373-74.

31. JEFF GOODELL, BIG COAL: THE DIRTY SECRET BEHIND AMERICA'S ENERGY FUTURE 15-16 (2006).

32. JAY INSLEE AND BRACKEN HENDRICKS: APOLLO'S FIRE: IGNITING AMERICA'S CLEAN ENERGY ECONOMY 178-81 (2008).

33. Yun Zhou, *Why Is China Going Nuclear*, 38 ENERGY POLICY 3755 (2010).

34. FRIEDMAN, *supra* note 1, at 111-169.

He argues that cooperation among the world's two largest economies will benefit both.

Professor David B. Spence writes on the impact of international oil companies' operations in developing countries. He describes the dilemma faced by companies when they operate in nations where the rule of law does not provide satisfactory guidelines for the social and environmental impact of their development activities. He discusses voluntary guidelines adopted by some of these companies.

John N. Moore and Kale Van Bruggen address the way that the globalization of agricultural markets has expanded the long-range issues that agribusiness must consider. Specifically, the potential of climate change should create the impetus for changes in agricultural practices. He suggests that farmers should look not only at the immediate cost of reducing climate change, but also at the longer-range agricultural benefits of such reductions.

Professor Peter Ørebech illustrates the difficulty of adopting Europe-wide policies that apply to countries with widely different energy resources. Norway obtains ninety-seven percent of its electricity from renewable hydroelectricity produced by a mix of private and public dam owners. It also exports hydropower to Denmark, which enables the Danes to alleviate the intermittence of their extensive wind power projects. He shows how the uniqueness of Norway's circumstances can lead to problems in applying rules drafted with more typical European countries in mind.

Advances in technology are having a particular impact in the electricity and transportation sectors. Professor Stephanie M. Stern shows why new technologies for residential consumers to cut their electricity consumption need to be carefully designed to overcome consumer resistance. She shows how behavioral psychology research may facilitate the creation of a more compatible relationship between the electric company and the end user.

Cheryl Dancey Balough also looks at the implications of "smart metering," but through the lens of privacy law. She expresses concern that existing law does not adequately take into account our basic rights to be left alone in our own homes and to control our personal information. She advocates legislative action to clarify and protect the privacy expectations of electricity users.

Bryan Lamble analyzes a technological development on the frontier of energy law that is attracting wide attention within the industry—the use of battery-powered motor vehicles as a source of power for the electric network, a technology commonly called V2G (vehicle-to-grid). He shows how the interaction of laws relating to electricity and transportation create a

maze of legal and policy issues regarding the large-scale implementation of electric vehicle usage, and in particular the use of V2G.

Another frontier technology is the use of new homegrown biofuels to enhance energy security. Adam Wolek discusses the technology of advanced biofuels, to which Congress has paid special attention. Federal legislation sets ambitious targets for the supply of advanced biofuels, the production of which is still in the developmental stage and is likely to require a combination of novel technologies, including biotechnologies. He looks at the way that many companies are using patent law incentives to establish and protect a platform that they hope will dominate the future market.

Because the potential market for replacing existing energy resources is so huge, any energy technology must face questions of scalability. Professor Dan Tarlock questions whether the largest source of U.S. renewable electricity, hydropower, could be significantly scaled upward to meet an even larger share of America's power needs. Physical limitations on potential dam sites, together with conflicting demands of other economic and environmental interests, lead to a conclusion that only a modest increase in hydropower seems likely.

Professor Keith Harley shows how the coal industry's unwillingness to admit the feasible scalability of a key pollution control technology has resulted in over twenty years of mercury emissions that could have been eliminated at low cost. Carbon injection technology—hardly novel or high-tech—has now been shown to be an economically efficient way of virtually eliminating power plant mercury emissions, but is still being resisted by the coal and power companies.

Finally, my own article addresses another frontier issue that is attracting extensive investment, the production of motor fuel from algae. Various technologies are being tested in specific projects, but can they be scaled up to provide the volumes that would make the fuel competitive? The land use and environmental implications of treating algae as a friend rather than an enemy will require reexamination of a number of basic laws that were written at a time when no one conceived of that possibility.