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Lost in the Flood

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BOOK REVIEW

Lost in the Flood

THE LAW OF ENERGY FOR SUSTAINABLE DEVELOPMENT. Edited by Adrian J. Bradbrook, Rosemary Lyster, Richard L. Ottinger & Wang Xi, 2005. Cambridge University Press. Pp. v, 618. $120.00,

and

COMPENDIUM OF SUSTAINABLE ENERGY LAWS. Edited by Richard L. Ottinger, Nicholas Robinson & Victor Tafur, 2005. Cambridge University Press. Pp. v, 594. $140.00.

*Reviewed by Dean Emeritus Joseph P. Tomain**

I. INTRODUCTION

"And he said 'Hey kid, you think that's oil? Man, that ain't oil; that's blood'
I wonder what he was thinking when he hit that storm
Or was he just lost in the flood?"

—Bruce Springsteen[1]

Sustainable energy law can be seen clearly through the eye of Hurricane Katrina. This unprecedented domestic tragedy most likely would have occurred even with a more enlightened energy policy. Nevertheless, without a more globally sensitive energy law, weather tragedies will recur. United States energy law and policy must align itself with the latest international and domestic thinking about sustainable development as expertly captured by

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1. BRUCE SPRINGSTEEN, *Lost in the Flood*, *on* GREETINGS FROM ASBURY PARK (Sony BMG 1973). Thanks to Bruce and thanks to my son Joseph A. Tomain for suggesting this title.

the companion volumes under review. Otherwise, we will be lost in the flood—again.

The publication of *The Law of Energy for Sustainable Development* (*The Law*)[2] could not be more timely. As the nation watches the unimagined devastation from Hurricane Katrina and contemplates the scale of the relief efforts yet to be made, we must also focus on future energy laws and policies. Although today the case cannot be made directly linking the tragedy of Katrina to global warming,[3] there is significant evidence of changing weather patterns due to the human contribution to world climate change.[4] The publication is also timely as consumers wrestle with record-high prices at the pump, and as the country tries to understand the voluminous Energy Policy Act of 2005 (EPAct 2005),[5] which President Bush signed into law on August 8, 2005. This perfect storm of events puts energy on the front page and above the fold in ways that it has not been in thirty years.

Over those last thirty years, the world has witnessed remarkable changes in thinking about energy, and those changes have been accompanied by changes in the law. At the same time, however, the United States has failed to follow, and in notable instances—such as its refusal to agree to the Kyoto Protocols—has aggressively rejected, the new energy thinking. This posture, which is clearly counter to emerging trends, is embedded in EPAct 2005 as the United States maintains its century old energy policy.

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2. THE LAW OF ENERGY FOR SUSTAINABLE DEVELOPMENT (Adrian J. Bradbrook, Rosemary Lyster, Richard L. Ottinger & Wang Xi eds., 2005) [hereinafter THE LAW]; COMPENDIUM OF SUSTAINABLE ENERGY LAWS (Richard L. Ottinger, Nicholas Robinson & Victor Tafur eds., 2005) [hereinafter COMPENDIUM].

3. Worldwatch Institute, Unnatural Disaster: The Lessons of Katrina (Sept. 2, 2005), http://www.worldwatch.org/press/news/2005/09/02/.

4. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: IMPACTS, ADAPTATION AND VULNERABILITY § 1.4.3.4 (2001), *available at* http://www.grida.no/climate/ipcc_tar/wg2/index.htm ("Features of projected changes in extreme weather and climate events in the 21st century include more frequent heat waves, less frequent cold spells, . . . greater intensity of heavy rainfall events, more frequent midcontinental summer drought, greater intensity of tropical cyclones, and more intense El Niño . . . events . . . ."); INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2001: SYNTHESIS REPORT 8 (2001), *available at* http://www.grida.no/climte/ipcc_tar/vol4/english/pdf/spm.pdf ("The rising socio-economic cost related to weather damage and to regional variations in climate suggest increasing vulnerability to climate change."); *id.* at 12 ("Populations that inhabit small islands and/or low-lying coastal areas [including deltas] are at particular risk of severe social and economic effects from sea-level rise and storm surges.").

5. Energy Policy Act of 2005 (EPAct 2005), Pub. L. No. 109-58, 119 Stat. 594.

Following the review of the companion volumes on *The Law of Energy for Sustainable Development* and the *Compendium of Sustainable Energy Laws,* this essay will distinguish the United States' traditional energy policy and the new thinking on energy policy. The contrast demonstrates the value of these significant publications.

II. REVIEW

The Law of Energy for Sustainable Development consists of a series of research papers presented at the first Colloquium of the IUCN Academy of Environmental Law hosted by the International Union for the Conservation of Nature and Natural Resources (IUCN), also known as the World Conservation Union.[6] The companion volume, *Compendium of Sustainable Energy Laws,* makes a practical desk reference because it presents key source materials in a useful and informative format. The Colloquium, held in Shanghai, China in November 2003, gathered academics, government officials, and business persons to adapt the concept of sustainable development to energy laws and policies. Sustainable development began as international effort to address the environmental impacts of continuing growth and the marked disparities between developed, developing, and undeveloped countries. Yet, because environmental harms occur throughout the fuel cycles of all natural resources, the role of energy in our economies must be taken into account. Consequently, any discussion of the environment must also account for energy production, distribution, consumption, and waste disposal. These two volumes make a significant contribution to connecting energy laws to sustainable development.[7]

The Law begins with a message from Secretary General Kofi A. Annan linking the conference and papers to Agenda 21,[8] an ambitious United Nations' program addressing the world's environmental and development needs ranging from combating poverty to

6. *See* World Conservation Union, IUCN Overview, http://www.iucn.org (last visited Oct. 25, 2005).

7. *See also* UNITED NATIONS DEVELOPMENT PROGRAMME, ENERGY FOR SUSTAINABLE DEVELOPMENT: A POLICY AGENDA (Thomas B. Johansson & José Goldemberg eds., 2002); IUCN ENVIRONMENTAL LAW PROGRAMME, ENERGY LAW AND SUSTAINABLE DEVELOPMENT (Adrian J. Bradbrook & Richard L. Ottinger eds., 2003).

8. *See* U.N. Conference on Environment & Development, June 3-14, 1992, *Agenda 21* [hereinafter *Agenda* 21], *available at* http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf. *See also* AGENDA 21: EARTH'S ACTION PLAN (Nicholas A. Robinson ed., 1993).

preserving valuable ecosystems. The volume is then introduced by Professor Nicholas A. Robinson, who has been the moving force behind the conference as chair of the Commission on Environmental Law for the World Conservation Union. In addition to discussing the role of the World Conservation Union in the development of environmental law, Professor Robinson makes the central point of the Colloquium—that "without law reform to restructure how energy is produced and distributed and used, there will not be a just society and natural systems will be changed in ways unintended and often detrimental to ecology and to human health."[9]

In that sentence, Professor Robinson encapsulates the essence of the two volumes: Energy production is essential to human and economic growth and improvement; but the extraction, refinement, and consumption of the natural resources used to produce energy exact a high cost. Checked or unchecked, the use of natural resources generates negative externalities, from polluted water, air, and land to larger global threats such as melting glaciers, climate change, and species extinction—all with attendant consequences on the quality of human life.[10] Preserving the quality of life and the environment which sustains it is not just a matter of wise public policy; it is a necessary matter for law. The law can cabin the externalities of energy production and use, and these two volumes show how that can be achieved.

Following Professor Robinson's welcome and introduction, the president of the European Counsel for Environmental Law, Professor Alexandre Kiss, delivers three public lectures on International Environmental Law that set out the fundamental principles and understandings necessary to address sustainable energy on a global scale. Professor Kiss provides working definitions of the environment, the connection of law to the environment, and the need for international law in this area. He then links sustainable development to the fundamental principles of international environmental law. While policy talk captures the attention of economists and politicians, it does not become operational until embodied in law. To be effective, sustainable energy law, like all regulatory law, must combine good policy and good politics with good legal principles and rules. In other words, policy, politics,

9. THE LAW, *supra* note 2, at 2.

10. *See* Elizabeth Kolbert, *The Climate of Man—I*, THE NEW YORKER, Apr. 25, 2005, at 56; *The Climate of Man—II*, THE NEW YORKER, May 2, 2005, at 64; *The Climate of Man—III*, THE NEW YORKER, May 9, 2005, at 52.

and law combine for effective regulation.[11] Professor Kiss' lectures lay the foundation for understanding the extraordinarily large, complex, and daunting challenge facing energy and environmental lawyers, politicians, and policymakers: How should law be designed in the face of the human, environmental, and economic consequences threatened by global climate change?

The introductory materials to *The Law* are excellent in themselves, and they also provide an excellent guide to the remainder of the volume. In total, the volume consists of thirty-four readable and informative chapters divided into sections that examine sustainable development through the role of energy law, the legal issues in contemporary energy law, contemporary international energy law, comparative energy law, electricity restructuring, financing for sustainable energy and civil society, and the procedural requirements of energy law for sustainable development. This ordering of sections is intelligent and helpful, especially for newcomers to the field, as the sections move from a general introduction to more specific problems and comparable examples.

The opening two chapters of *The Law* by Professor Jose Goldemberg and Professor Thomas B. Johansson establish the fundamental problem of sustainable development: the necessity of developing a solid understanding of the relationship between energy production and economic growth. While everyone can acknowledge that energy production has direct environmental impacts, the next step is to discern the connection between energy, economic growth, and the human condition. No nation, particularly no developing nation, will impose environmental regulations that retard energy production to the detriment of the quality of life. Instead, it is better to acknowledge energy-economy *relationships*, for there is no single relationship to guide law and policy.

Both Goldemberg and Johansson demonstrate that there are dramatic differences in the energy-economy relationships in developed and developing countries. As a country develops, there is a linear relationship between energy production and economic growth. Moving from a local wood- and coal-burning economy to more complex national energy production and distribution systems enables greater productivity and greater human comfort. Such a movement also generates greater externalities. Equating

11. *See* Joseph P. Tomain & Sidney A. Shapiro, *Analyzing Government Regulation*, 49 ADMIN. L. REV. 377 (1997).

an improved economy with increased energy consumption is non-controversial in developing countries.[12] As such, Goldemberg and Johansson take the analysis one step further and argue that more energy usage in developing countries means not only economic growth but a "better life."[13] Quality of life is measured in both chapters by the human development index (HDI), a measurement used by the United Nations Development Programme to determine how well countries are meeting not only the economic, but also the social needs of the people. Professor Goldemberg concludes, not surprisingly, that "energy has a determinate influence on the HDI, particularly in the early stages of development . . . ."[14]

In more advanced economies, however, the linear relationship breaks down in two particulars. In developed countries, economic productivity can *increase* with the use of *less* energy as a result of efficiency improvements, technological changes, and fuel substitutions.[15] Additionally, the linear energy-economy relationship breaks down for developed countries because of the increase in pollution caused by increased energy production. Economic efficiency suffers when all costs are properly internalized.

In other words, there comes a point on the energy-economy curve where less is more,[16] as the quality of life suffers as energy production increases in developed countries.[17] Instead of a linear relationship, the energy-economy relationship in developed countries is an S-shaped curve, and growth becomes uneconomic after the optimum point.[18] The authors thus argue that sound, responsible energy policies, while differing among countries, must become part of any sustainable development strategy.

The introductory chapters pose the core questions: How can a country balance energy, economy, and the environment? How can

12. *See also* Jamal Saghir, *Energy and Poverty: Myths, Links, and Policy Issues* (The World Bank Group, Energy and Mining Sector Board, Working Note No. 4, 2005), *available at* http://siteresources.worldbank.org/INTENERGY/Resources/EnergyWorkingNotes_4.pdf.

13. THE LAW, *supra* note 2, at 37.

14. *Id.* at 45.

15. *Id.* at 41. *See also* AMORY B. LOVINS ET AL., SMALL IS PROFITABLE: THE HIDDEN ECONOMIC BENEFITS OF MAKING ELECTRICAL RESOURCES THE RIGHT SIZE (2002); AMORY B. LOVINS ET AL., WINNING THE OIL ENDGAME: INNOVATION FOR PROFITS, JOBS AND SECURITY (2004).

16. Amory B. Lovins, *More Profit with Less Carbon*, SCI. AM., Sept. 2005, at 74.

17. Herman E. Daly, *Economics in a Full World,* SCI. AM., Sept. 2005, at 100 ("Once we pass the optimal scale, growth becomes stupid in the short run and impossible to maintain in the long run. Evidence suggests that the U. S. may already have entered the uneconomic growth phase . . . ." (citation omitted)).

18. *Id.* at 106.

a country achieve a balance that is consistent with the balances sought by other countries in the world community? As a country continues developing, can it continue to increase energy intensity with the pollution that accompanies it? Or can a country realize energy efficiencies and utilize alternative, and less harmful, renewable energy resources while at the same time improving the quality of life for its citizens? These chapters argue that an approximate answer to these and related questions is found in the concept of sustainable development. More particularly, the answer is to be sought in the role that energy law and policy play in sustainability.

The World Commission on Environment and Development first defined the concept of "sustainable development" as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."[19] The World Commission on Environment was charged with preparing for the 1992 Rio de Janeiro Conference on the Environment and Development. That conference resulted in the UN's Agenda 21[20] and in the Rio Declaration on Environment and Development.[21] The Rio Declaration sets out principles for a sustainable society, and Agenda 21 offers a comprehensive plan for satisfying those principles. The scope of these documents is captured in the Preamble to Agenda 21:

> [I]ntegration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.[22]

The Rio Conference moved forward in 2002 in Johannesburg with the UN World Summit on Sustainable Development (WSSD). The World Summit on Sustainable Development began with a strong affirmation of the Rio principles and advocated the full implementation of Agenda 21. In addition, the WSSD also adopted a

19. WORLD COMM'N ON ENV'T & DEV., OUR COMMON FUTURE 8 (1987) (also known as the Bruntdland Commission Report).

20. *See Agenda 21*, *supra* note 8.

21. U.N. Conference on Environment & Development, June 3-14, 1992, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26 (1992), http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

22. *Agenda 21*, *supra* note 8, § 1.1.

Plan of Implementation[23] that in part focuses on particular steps to be taken relative to energy. These steps include integrating energy considerations and efficiency into socio-economic programs, developing alternative energy technology, improving energy efficiency, and increasing use of renewable energy resources.[24]

It is one thing to think about managing the global environment, it is quite another to actually do so. *The Law* recognizes this challenge by properly focusing on the concrete measures that can be adopted by policymakers and legislators thinking about the energy and environmental futures of the world by providing specific examples of the laws that can be adopted to achieve sustainable societies. Dean Emeritus Richard L. Ottinger authors a chapter that establishes the legal framework for energy in a program of sustainable development. This chapter identifies several specific legal steps that can be taken to move a country away from its traditional fossil-fuel-based energy policy to one that is more consonant with environmental protection and sustainability. For example, Ottinger suggests the simple expedient of removing subsidies from fossil fuel and nuclear power and re-assigning them to renewable fuels and more efficient technologies.[25] He then offers other specific proposals such as efficiency standards for buildings and appliances, renewable portfolio standards for utilities, fuel standards for vehicles, and carbon taxes on noxious emissions that can be adopted as part of a smart energy policy.

The Law is rich in ideas for thinking about energy law and sustainable development in global and domestic contexts. Several chapters examine specific projects either undertaken in particular countries, such as China and Japan, or address particular topics, such as implementing the Kyoto Protocol, financing sustainable development, and green pricing and marketing. *The Law* includes several chapters on comparative energy law as well as three chapters on electricity restructuring lessons from the United States, Australia, and New Zealand. The book also contains three chapters on financing sustainable energy programs, which conclude with a case for sustainable energy from a business perspective made by Mr. Nick Wood, the director for external affairs from

23. COMPENDIUM, *supra* note 2, at 111; *see also* World Summit on Sustainable Development, Johannesburg, S. Afr., Aug. 26-Sept. 4, 2002, Plan of Implementation, http://www.johannesburgsummit.org/ (follow "Plan of Implementation" hyperlink).

24. THE LAW, *supra* note 2, at 20-21.

25. *Id.* at 103-04, 106.

Shell Company in China. Indeed, sustainable energy must harness the resources of the private sector as demonstrated by international energy companies like British Petroleum and Shell Oil, and domestic companies like Cinergy, which have invested considerable time in mapping out sustainable energy programs for their businesses.[26]

The *Compendium of Sustainable Energy Laws* (*Compendium*)[27] is an excellent supplement to *The Law*. The *Compendium* provides the text of the Kyoto Protocol, the Rio Declaration, and the Plan of Implementation for the United Nations WSSD, as well as other international declarations and legal instruments. These materials offer ready access to the source law in the area, and they provide content for what is meant by the law of sustainable development. In addition to multinational instruments, regional international agreements, such as the North American Agreement on Environmental Cooperation, the energy chapter of the North American Free Trade Agreement, and the European Energy Charter Conference documents are also included.

In addition, the *Compendium* includes select national legislation on sustainable energy law. Legal documents from Asia and Europe including documents from China, Japan, and the European Union are made available. The United States is represented in the *Compendium* by portions of the Energy Policy Act of 1992 that deal with energy efficiency standards for buildings and appliances and utility investment in conservation and integrated resource planning.

In truth, however, U.S. efforts with regard to either domestic or international sustainable energy have been more lip service than real contributions. While the word "sustainability" appears in various U.S. energy documents and is occasionally part of the country's energy rhetoric, sustainable development plays no significant role in United States energy policy. In 1991, for example, President Bush pushed a national energy strategy that says that domestic energy policy should provide for an "environmentally sustainable energy future."[28] Similarly, Presidents Clinton and

26. *See, e.g.*, British Petroleum, http://www.bp.com/subsection.do?categoryId=4451&contentId=3072030 (climate change); Shell Group, http://www.shell.com (follow "Environment and Society" hyperlink; then follow "Key issues and topics" hyperlink; then follow "Climate change" and "New energies" hyperlinks) (climate change and renewable resources); and Cinergy, http://www.cinergy.com/sustain/default.asp (sustainable development).

27. COMPENDIUM, *supra* note 2.

28. DOE, NATIONAL ENERGY STRATEGY: POWERFUL IDEAS FOR AMERICA 2 (1991).

George W. Bush mention sustainability, yet address it only marginally in their key documents.[29] Nevertheless, United States energy policy has been dominated for over a century by a particular way of thinking about energy that runs counter to today's smart thinking about energy and its future.

III. UNITED STATES ENERGY POLICY VERSUS THE NEW THINKING ON ENERGY POLICY

A. United States Energy Policy

Throughout the twentieth century, United States energy policy was driven by technological innovations and a strong belief in a direct relationship between energy production and economic growth,[30] which, together with government support, have shaped industry structure. As a result, today energy is produced and refined by large-scale, capital-intensive fossil fuel plants, and distributed by a national infrastructure of pipelines and transmission grids. Of the approximately 100 quadrillion BTUs of energy consumed in the United States, more than 90 percent derives from fossil fuels and nuclear power.[31]

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29. *See* PRESIDENT'S COUNCIL ON SUSTAINABLE DEVELOPMENT, SUSTAINABLE AMERICA: A NEW CONSENSUS FOR THE FUTURE (1996), http://clinton2.nara.gov/PCSD/Publications/TF_Reports/amer-top.html.; DOE, NATIONAL ENERGY POLICY PLAN (1995); DOE, STRATEGIC PLAN: PROVIDING AMERICA WITH ENERGY SECURITY, NATIONAL SECURITY, ENVIRONMENTAL QUALITY, SCIENCE LEADERSHIP (1997); DOE, COMPREHENSIVE NATIONAL ENERGY STRATEGY (1998) (Clinton); and NAT'L ENERGY POLICY DEV. GROUP, NATIONAL ENERGY POLICY (2001) (Bush), *available at* http://www.whitehouse.gov/energy/National-Energy-Policy/pdf.

30. This belief is clearly exemplified by President Bush's speech at the signing of the EPAct 2005:

> I want to remind you about the fact that this economy of ours has been through a lot. And that's why it was important to get this energy bill done, to help us continue to grow. We've been through a stock market decline; we went through a recession; we went through corporate scandal; we had an attack on our homeland; and we had the demands of an ongoing war on terror. And to grow this economy, we worked together to put together an economic growth policy, an economic growth package, the cornerstone of which was to cut the taxes on the American people. And that tax relief plan is working. The economy is strong, and it is growing stronger. And what this energy bill is going to do, it's just going to help keep momentum in the right direction so people can realize their dreams.

Press Release, The White House, President Signs Energy Policy Act (Aug. 8, 2005), *available at* http://www.whitehouse.gov/news/releases/2005/08/20050808-6.html.

31. ENERGY INFORMATION. ADMIN., ANNUAL ENERGY REVIEW 2004 8-9 (2005), *available at* http://www.eia.doe.gov/emeu/aer/contents.html.

Additionally, energy industries were shaped by the economic theory of natural monopoly,[32] a theory that favored the creation of state-protected monopolies supported by cost-of-service rate-making, which rewarded prudently operated companies for building large energy plants.[33] The more a firm invested in capital improvements and expansions, the more money accrued to its shareholders. Rewarding capital investment is a good thing in an economy that is expanding, in a country that needs the construction of infrastructure,[34] and in situations in which there is a direct correlation between energy consumption and economic growth,[35] because in such an economy efficiencies can be realized. The oil industry, the nuclear power industry, the electric industry, and the natural gas industry are all examples of traditional energy regulation; and all were designed to capture scale economies through large-scale, capital-intensive national firms. There is a point on the economic curve, however, where firms and industries reach the limits of their economies of scale. At that point, new technologies and new thinking take over.

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32. Natural monopoly can be most simply defined as a situation in which, for some period of time, product costs "will be lower if they consist in a single supplier." ALFRED E. KAHN, THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS 11 (1988); *see also* WILLIAM W. SHARKEY, THE THEORY OF NATURAL MONOPOLY (1982); ROGER SHERMAN, THE REGULATION OF MONOPOLY 81 (1989); SANFORD V. BERG & JOHN TSCHIRHART, NATURAL MONOPOLY REGULATION: PRINCIPLES AND PRACTICE (1988); W. KIP VISCUSI ET AL., ECONOMICS OF REGULATION AND ANTI-TRUST 79-81 (2d ed. 1995); Paul Joskow, Regulation of Natural Monopolies (2005), http://econ-www.mit.edu/faculty/download_pdf.php?id=1086. For a critique of natural monopoly, see Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55 (1968); Peter Z. Grossman, *Is Anything a Natural Monopoly?, in* THE END OF NATURAL MONOPOLY: DEREGULATION AND COMPETITION IN THE ELECTRIC POWER INDUSTRY (Peter Z. Grossman & Daniel H. Cole eds., 2003).

33. *See, e.g.*, Natural Gas Act, 15 U.S.C. §§ 717-717z (2000); Federal Power Act Part II, 16 U.S.C. §§ 824-824w (2000).

34. *See, e.g.*, JOSE A. GOMEZ-IBANEZ, REGULATING INFRASTRUCTURE: MONOPOLY, CONTRACTS, AND DISCRETION (2003).

35. See AMORY B. LOVINS, SOFT ENERGY PATH: TOWARD A DURABLE PEACE ch. 1 (1977) for a description and critique of the claim that there is a positive correspondence between energy consumption and economic growth. *See also* U.S. PIRG EDUC. FUND, REDIRECTING AMERICA'S ENERGY: THE ECONOMIC AND CONSUMER BENEFITS OF CLEAN ENERGY POLICIES (2005), *available at* http://newenergyfuture.com/reports/redirectingamericasenergy.pdf; NATURAL RESOURCES DEFENSE COUNCIL, JOBS AND THE CLIMATE STEWARDSHIP ACT: HOW CURBING GLOBAL WARMING CAN INCREASE EMPLOYMENT (2005), *available at* http://www.rprogress.org/newpubs/2005/CSAjobs.pdf; CTR. FOR AMERICAN PROGRESS, THE PROGRESSIVE PRIORITIES SERIES: SECURING OUR ENERGY FUTURE (2004), *available at* http://www.americanprogress.org/atf/cf/{E9245FE4-9A2B-43C7-A521-5D6FF2E06E03}/ENERGYCHAPTER.pdf.

There is evidence that traditional U.S. energy policy has reached its maturity. The severe energy crisis in California in the summer of 2000,[36] the collapse of Enron,[37] and a major blackout in August 2003[38] are all indicators of a traditional energy policy in crisis. For the last few decades, we have witnessed a virtual complete deregulation of the oil industry, the death of the nuclear power industry,[39] and significant deregulation in the interstate wholesale segments of the natural gas and electricity industries.[40] To counteract the demise of the traditional policy, we are witnessing an increase in non-utility electricity providers, the emergence of new technologies and new energy sources,[41] and increased concern about our energy future. Nevertheless, traditional energy policy is resistant to change, will not disappear in the near term, and persists with remarkable staying power despite the new energy thinking.

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36. *See, e.g.*, JAMES L. SWEENEY, THE CALIFORNIA ELECTRICITY CRISIS (2002); Paul L. Joskow, *California's Electricity Crisis*, 17 OXFORD REV. OF ECON. POL'Y 365 (2001).

37. *See, e.g.*, Jacqueline Lang Weaver, *Can Energy Markets Be Trusted? The Effect of the Rise and Fall of Enron on Energy Markets*, 4 HOUS. BUS. & TAX L.J. 1 (2004), *available at* www.hbtlj.org; MIMI SHWARTZ & SHERRON WATKINS, POWER FAILURE: THE INSIDE STORY OF THE COLLAPSE OF ENRON (2003).

38. U.S.-CANADA POWER SYSTEM OUTAGE TASK FORCE, FINAL REPORT ON THE AUGUST 14, 2003 BLACKOUT IN THE UNITED STATES AND CANADA: CAUSES AND RECOMMENDATIONS (2004), *available at* https://reports.energy.gov/.

39. J. SAMUEL WALKER, CONTAINING THE ATOM: NUCLEAR REGULATION IN A CHANGING ENVIRONMENT, 1963-1971 ch. 2 (1992); *see also* MARK HERTSGAARD, NUCLEAR INC.: THE MEN AND MONEY BEHIND NUCLEAR ENERGY 44 (1983); LEONARD S. HYMAN, ANDREW S. HYMAN & ROBERT C. HYMAN, AMERICA'S ELECTRIC UTILITIES: PAST, PRESENT AND FUTURE chs. 19-20 (2000); Joseph P. Tomain, *Nuclear Futures*, 15 DUKE ENVT. L. & POL'Y F. 221 (2005).

40. *See, e.g.*, Order No. 636, Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines After Wellhead Decontrol, III F.E.R.C. STATS. & REGS. P 30,939 (1991); Order 888, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, [Regs. Preambles 1991-1996], F.E.R.C. Stats. & Regs. P 31,036 (1996), 61 Fed. Reg. 21,540 (1996) (to be codified at 18 C.F.R. pts. 35, 385) [hereinafter Order 888]; Order No. 2000, Reg. Transmission Orgs., [Regs. Preambles 1996-2000] F.E.R.C. STATS & REGS. P 31,089 (2000), 65 Fed. Reg. 809 (2000) (to be codified at 18 C.F.R. pt. 35), order on reh'g, Order No. 2000-A, Reg. Transmission Orgs., [Regs. Preambles 1996-2000] F.E.R.C. STATS. & REGS. P 31,092 (2000), 65 Fed. Reg. 12,088 (2000) (to be codified at 18 C.F.R. pt. 35).

41. AMORY B. LOVINS ET AL., SMALL IS PROFITABLE: THE HIDDEN ECONOMIC BENEFITS OF MAKING ELECTRICAL RESOURCES THE RIGHT SIZE (2002); VIJAY V. VAITHEESWARAN, POWER TO THE PEOPLE: HOW THE COMING ENERGY REVOLUTION WILL TRANSFORM AN INDUSTRY, CHANGE OUR LIVES, AND MAYBE EVEN SAVE THE PLANET (2003).

B. New Thinking on Energy Policy

The Law and the *Compendium* are the brightest example of the international dimension of the new energy thinking. Although ambitious, sustainable energy is the necessary direction for our economic and environmental futures.[42] The core ideas and values of sustainable development are also being adopted in domestic energy policy discussions among bipartisan groups of government, business, and academic leaders.[43]

Contemporary discussion of domestic and international energy policies involves growing concern about the availability and price of oil,[44] global climate change,[45] terrorism,[46] and international markets[47] as well as healthy energy economies. In short, any contemporary discussion of energy should involve four variables: energy, the environment, security, and globalization. These variables come together and are concentrated by the threat of global climate change. Climate change typifies the new energy thinking—all of the variables are related to each other,[48] and a sound energy future must attend to this reality. An alternative

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42. George Musser, *The Climax of Humanity*, SCI. AM., Sept. 2005, at 44.

43. *See generally* ENERGY FUTURE COALITION, CHALLENGE AND OPPORTUNITY: CHARTING A NEW ENERGY FUTURE (2003), http://www.tedturner.com/download/energy_coalition.pdf; NAT'L COMM'N ON ENERGY POLICY, ENDING THE ENERGY STALEMATE: A BI-PARTISAN STRATEGY TO MEET AMERICA'S ENERGY CHALLENGES (2004), http://www.energycommission.org/ewebeditpro/items/O82F4682.pdf; CENTER FOR AMERICAN PROGRESS, THE PROGRESSIVE PRIORITIES SERIES: SECURING OUR ENERGY FUTURE (2004), http://www.americanprogress.org/atf/cf/{E9245FE4-9A2B-43C7-A521-5D6FF2E06E03}/ENERGYCHAPTER.pdf; *see also* William J. Clinton Presidential Foundation, Conference Proceedings, *New Thinking on Energy Policy: Meeting the Challenges of Security, Development, and Climate Change* (Dec. 6, 2004) (video *available at* http://www.clintonfoundation.org/feature-energy-120604.htm) (last visited Oct. 18, 2005).

44. *See, e.g.*, AMORY B. LOVINS ET AL., WINNING THE OIL ENDGAME: INNOVATION FOR PROFITS, JOBS, AND SECURITY (2004); PAUL ROBERTS, THE END OF OIL: ON THE EDGE OF A PERILOUS NEW WORLD (2004).

45. *See, e.g.*, INT'L CLIMATE CHANGE TASKFORCE, MEETING THE CLIMATE CHALLENGE: RECOMMENDATIONS OF THE INTERNATIONAL CLIMATE CHANGE TASKFORCE (2005), http://www.americanprogress.org/site/pp.asp?c=biJRJ8OVF&b=306503; *see* Press Release, Inst. for Pub. Pol'y Research, G8–Plus Group Needed to Tackle Climate Change (Jan. 24, 2005), http://www.ippr.org/pressreleases/archive.asp?id=1264&fID=62.

46. *See, e.g.*, GRAHAM ALLISON, NUCLEAR TERRORISM (2004).

47. Of increasing concern is the demand for energy, particularly oil and natural gas, by China and India. *See, e.g.*, Keith Bradsher, *2 Big Appetites Take Seats at the Oil Table,* N.Y. TIMES, Feb. 18, 2005, at C1; *see also* Simon Romero & Jad Mouawad, *Saudis in Strategy to Export More Oil to India and China*, N.Y. TIMES, Feb. 18, 2005, at C4.

48. Sam Kalen, *Replacing a National Energy Policy with a National Resource Policy*, 19 NAT. RESOURCES & ENV'T 9 (2005).

energy policy, at the very minimum, must acknowledge and address the interrelatedness of these policy variables. As the works under review attest, the smart thinking of today is being done under the rubric of sustainable development.

While bipartisan thinking about energy and the environment is more visible, it has yet to make its way into new energy laws. The William J. Clinton Presidential Foundation, for example, hosted a forum in December 2004 entitled New Thinking on Energy Policy: Meeting the Challenges of Security, Development, and Climate Change.[49] The Clinton Conference brought together international business and government leaders to discuss the global future of energy. The title of the conference captures the necessity of linking energy and the environment and, equally significantly, of linking both to matters of security. Also in 2004, the Bipartisan National Commission on Energy Policy issued a major study entitled *Ending the Energy Stalemate*[50] that similarly emphasizes the interconnectedness of energy, the environment, the economy, and security at the national and international levels. A year earlier, the Energy Future Coalition, another bipartisan group of energy leaders and thinkers published a similar report emphasizing the same variables driving sustainable energy discussions.[51]

If traditional U.S. energy policy has satisfied energy supply and demand in the past, and if new concerns are influencing our thinking and debate about energy policy, then we should look to reforms and new policies that move away from traditional energy policy and move towards alternatives that are more responsive to the new concerns. However, such is not the case even with the recent passage of the first major energy legislation in nearly thirty years.

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49. William J. Clinton Presidential Foundation, Conference Proceedings, *New Thinking on Energy Policy: Meeting the Challenges of Security, Development, and Climate Change* (Dec. 6, 2004) (video *available at* http://www.clintonfoundation.org/feature-energy-120604.htm) (last visited Oct. 18, 2005).

50. NAT'L COMM'N ON ENERGY POLICY, ENDING THE ENERGY STALEMATE: A BIPARTISAN STRATEGY TO MEET AMERICA'S ENERGY CHALLENGES (2004), http://www.energycommission.ws]org/ewebeditpro/item/082F4682.pdf.

51. ENERGY FUTURE COALITION, CHALLENGE AND OPPORTUNITY: CHARTING A NEW ENERGY FUTURE (2003), http://www.energyfuturecoalition.org/pubs/EFC%20Report.pdf. *See also* NATURAL RESOURCES DEFENSE COUNCIL, A RESPONSIBLE ENERGY PLAN FOR AMERICA (2005), *available at* http://www.nrdc.org/air/energy/rep/rep.pdf.

IV. CONCLUSION

President Bush signed the EPAct 2005[52] into law on August 8, 2005 with these words:

> *The Energy Policy Act of 2005 is going to help every American who drives to work, every family that pays a power bill, and every small business owner hoping to expand.*
>
> *The bill is the result of years of effort . . . this bill launches an energy strategy for the 21st century, and I've really been looking forward to signing it.*[53]

Although the words are progressive and hopeful, EPAct 2005 is simply a continuation of the traditional energy policy and pays little attention to sustainable energy development. Had the President been signing this bill into law in 1905, he would have been accurate in saying that he was launching an energy strategy for the next century. However, as written, it does precious little to move the country were it needs to be and, in fact, it will not help every American who drives to work, or every family that pays a power bill, or every small business hoping to expand. Instead, the EPAct 2005 continues a century-old energy policy, ignoring the sustainability needs of the future.

EPAct 2005 does provide some funding for renewable resources and for research and development in new energy technologies and higher energy efficiencies. Nevertheless, the bulk of the Act favors traditional energy industries and provides, according to a House of Representatives report, over $4 billion to the oil industry, $3 billion to the coal industry, and over $5 billion to the nuclear power industry.[54] The Act favors traditional energy industries while loosening environmental restrictions, loosening restrictions on oil and gas drilling on our nation's coasts, failing to reduce dependence on foreign oil, and failing to reduce oil consumption even with the simple expedients of improved vehicle fuel

52. EPAct 2005, Pub. L. No. 109-58, 119 Stat. 594.

53. Press Release, The White House, President Signs Energy Policy Act (Aug. 8, 2005), *available at* http://www.whitehouse.gov/news/releases/2005/08/.

54. U.S. H.R. COMM. ON GOV'T REFORM – MINORITY STAFF SPECIAL INVESTIGATIONS DIV., FLASH REPORT: KEY IMPACTS OF THE ENERGY BILL – H.R. 6 (2005), http://www.democrats.reform.house.gov/investigations.asp?Issue=Energy+Policy (follow "Energy Bill (H.R. 6) Fails Americans in Four Fundamental Areas" hyperlink) (last visited Nov. 12, 2005).

standards and requirements for greater use of renewable energy resources.[55]

At the beginning of the twenty-first century, the United States energy policy confronts an entirely different world, one that requires a serious re-evaluation of the past 100 years of energy development. In short, goals of cheap abundant energy for economic growth to improve the quality of life are desirable goals, yet in 2005 we face significant challenges. The first challenge is to achieve energy efficiencies together with economic improvement and corresponding increases in the quality of life. The second challenge is more pointedly global and environmental. Human contribution to climate change is a reality even though future consequences are uncertain. We cannot go blindly forward by ignoring this reality; the costs are too severe.

Blood and oil, arson and rape, ruin and chaos were all part of being lost in the flood following Hurricane Katrina. Sanctuary from that devastation was hard to come by, and without energy laws and policies that are sustainable, environmentally sensitive, attentive to the threats of climate change, focused on ecological preservation as much as or more than on energy production, finding sanctuary in the future will be harder still. Billions of dollars were lost in the flood; international and domestic energy policies must take the precautions necessary to avoid repeat storm damages.

55. Robert L. Bamberger & Carl E. Behrens, Energy Policy: Comprehensive Energy Legislation (H.R. 6) in the 109th Congress (Cong. Research Serv., CRS Issue Brief for Congress, Order Code IB10143, updated July 29, 2005), *available at* http://www.ncseonline.org/NLE/CRSreports/05jul/IB10143.pdf.