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Energy Policy Advice for the New Administration

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ENERGY POLICY ADVICE FOR THE NEW ADMINISTRATION

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I. INTRODUCTION

On January 20, 1989, the transition in presidential administrations moved the country into a new political era. The Bush Administration, like the preceding administrations, will regulate energy production, distribution, and consumption. Continued energy regulation is a fact of modern economic life. The new president may be surprised to find that our domestic energy policy falls within a relatively narrow perimeter which even he is powerless to enlarge dramatically. For better or worse, the normal boundary of national energy policy is well established by a century of experience.[1]

Although predicting the future is a fool's game and predicting future government regulation is even more foolish during a change in presidential administrations, certain directions in energy regulation can be seen. This Article will address those directions. Broadly speaking, federal regulation is moving toward greater reliance on market ordering in the areas of natural gas and electricity through administrative rulemaking rather than through congressional enactments. At the same time, federal regulation is being supplanted in part by more cautious state regulation. However, federal and state regulations are fueled by different goals. The goal of allocative (economic) efficiency motivates federal efforts. The goal of distributional equity guides state regulation. In both cases, federal and state efforts are consistent with mainstream energy policy.

This Article will proceed as follows. Part I will present the dominant model of energy regulation by contrasting the energy policies of Presidents Carter and Reagan and by showing why each failed to achieve their more ambitious objectives. Part II will explain federal natural gas and electricity regulations now being considered by the Federal Energy Regulatory Commission (FERC). Part III will examine state natural gas and electricity regulations. Because federal and state regulations often conflict, the United States Supreme Court frequently must resolve the resulting federalism problems. Part IV discusses recent energy decisions of the Supreme Court. The Article concludes by suggesting a dozen future energy initiatives that are generated by and are consistent with the traditional model of national energy policy.

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1. *See* J. CLARK, ENERGY AND THE FEDERAL GOVERNMENT: FOSSIL FUEL POLICIES, 1900-1946 (1987); D. VIETOR, ENERGY POLICY IN AMERICA SINCE 1945: A STUDY OF BUSINESS-GOVERNMENT RELATIONS (1984).

II. THE U.S. ENERGY POLICY MODEL

The benchmark for contemporary energy regulation is the Arab Oil Embargo of October 1973, which forced citizens to wait for hours in line to buy gasoline rationed by license plate number. There were earlier indicators of a troubled energy economy in the late 1960s as domestic oil production peaked[2] and inflation continued to grow. In response, President Nixon began to realign energy agencies slightly by creating the Federal Energy Office[3] to coordinate oil price regulations and gather energy information to bolster a sagging economy. Still, it was the OPEC oil embargo that provoked energy policymakers to act as the country experienced a tightening of its energy supplies, particularly oil, the lifeblood of commerce, transportation, and national defense. Later, the Federal Energy Office became the Federal Energy Agency,[4] and ultimately, in 1977, became the Department of Energy (DOE) during the Carter Administration.[5]

Carter's attempts to centralize energy decisionmaking and policymaking and to coordinate energy planning were followed by Reagan's attempts to deregulate energy industries. The Carter and Reagan administrations' efforts to centralize and to deregulate energy industries, respectively, were unsuccessful. Neither administration was effective in radically altering energy regulation. Rather, energy regulation hewed closely to a model policy that has developed over the last century. The inability of these two presidential administrations to control energy policy should be instructive to a new administration and its energy policymakers. Also, the discussion of energy regulation during the Carter and Reagan administrations serves as a prelude to an examination of recent energy developments and current regulatory proposals which will confront the new president.

A. Centralization and President Carter

The Carter Administration was enveloped by a cascade of energy regulations. During his four years in office, Carter delivered several major energy addresses, each of which resulted in significant legislation. The creation of the DOE, together with sweeping energy policies directed at both conventional fuels and renewable resources, was the most significant attempt at national and comprehensive energy planning in the country's history. At their most ambitious, these legislative packages were an attempt

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2. *See, e.g.*, Bupp & Schuller, *Natural Gas: How to Slice a Shrinking Pie*, in ENERGY FUTURE 56-78 (R. Stobaugh & D. Yergin eds. 1979) (noting that State Department was aware of domestic peak in oil production in 1968 and peak occurs in 1970); DEPARTMENT OF ENERGY, ANNUAL ENERGY REVIEW 1986 DOE/EIA-0384(86) 2 (1987) (domestic oil production peaked in 1970 at 20.40 quadrillion BTUs or 3,468 million barrels of oil).

3. *See* J. KALT, THE ECONOMICS AND POLITICS OF OIL PRICE REGULATION: FEDERAL POLICY IN THE POST-EMBARGO ERA 1-31 (1981).

4. Federal Energy Administration Act of 1974, Pub. L. No. 93-275, 88 Stat. 115 (1974).

5. Department of Energy Organization Act, Pub. L. No. 95-91, 91 Stat. 565 (codified primarily at 42 U.S.C. §§ 7101-7375 (1982)).

to move the country's energy policies from the 19th century into the 21st century.

There were four significant energy events during the Carter Administration. First, Carter centralized energy administration in the cabinet level Department of Energy. Unfortunately, from the standpoint of coordination, the DOE did not have adequate power to design a comprehensive national energy plan. Energy decisionmaking and policymaking responsibilities were scattered over several branches of the federal government, and authority was fragmented even within the DOE.[6]

The second energy event of the Carter Administration was President Carter's "moral equivalent of war" speech on April 18, 1977.[7] This speech outlined the substantive principles of President Carter's energy policy. Although the principles were not free from conflicts and difficulties,[8] the speech led to the passage of the National Energy Act in October 1978.[9] The National Energy Act addressed conventional fuels and tried to move the country away from a dependence on foreign oil. Among other goals, the National Energy Act intended to promote the use of coal; increase energy efficiency; modernize utility ratemaking; stimulate conservation; encourage the creation of a new electricity market; and restructure a distorted natural gas market.

The third major energy event was President Carter's energy address on April 5, 1979.[10] This address stressed the need for decontrol of oil prices to increase domestic oil production. The address led to Congress' passage of the Crude Oil Windfall Profits Tax.[11] Congress designed the Windfall Profits Tax to capture some of the economic rents domestic oil producers realized as a result of the rise in world oil prices.

The Carter Administration's final major energy event was President Carter's energy address on July 15 and 16, 1979,[12] in which he returned to his moral equivalent of war rhetoric. Again, Congress answered the speech by passing the Energy Security Act of 1980.[13] The Energy Security Act was

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6. *See* Tomain, *Institutionalized Conflicts Between Law and Policy,* 22 HOUS. L. REV. 661 (1985); *see also* Aman, *Institutionalizing the Energy Crisis: Some Structural and Procedural Lessons,* 65 CORNELL L. REV. 491 (1980); Byse, *The Department of Energy Organization Act: Structure and Procedure,* 30 ADMIN. L. REV. 193 (1978).

7. J. CARTER, PUBLIC PAPERS OF THE PRESIDENTS 656-62 (1977).

8. Tomain, *supra* note 6, at 672-76.

9. The National Energy Act consists of five pieces of major legislation: the National Energy Conservation Policy Act, 42 U.S.C. §§ 4331-4335 (1982); the Powerplant and Industrial Fuel Use Act, 42 U.S.C. §§ 8301-8484 (1982); the Natural Gas Policy Act, 15 U.S.C. §§ 3301-3342 (1982); the Public Utility Regulatory Policies Act, Pub. L. No. 95-617, 92 Stat. 3117 (1982); and the Energy Tax Act, Pub. L. No. 95-618, 92 Stat. 3174 (1982).

10. J. CARTER, *supra* note 7, at 609-14 (1979).

11. Pub. L. No. 96-223, 94 Stat. 229 (codified in various sections of 17, 19, 26, 31, and 42 U.S.C.).

12. J. CARTER, *supra* note 7, at 1235-47 (1979).

13. The Energy Security Act also consists of several pieces of legislation including: the Defense Production Act Amendments of 1980, 50 U.S.C. §§ 2061-2166 (1982); the United

a dramatically conceived package of legislation that turned energy policy away from conventional resources and toward the development and promotion of synthetic fuels, such as oil and natural gas, from coal, oil shale, and tar sands. The Energy Security Act also attempted to stimulate a third energy transition[14] from fossil fuels to renewable resources such as solar energy, biomass, alcohol, and geothermal steam and made conservation a larger part of the country's energy planning.

The legislation that emerged during the Carter Administration did not achieve the goal of coordinating national energy policy. Nor did the legislation stimulate the so-called third energy transition from fossil fuels to renewable resources and conservation. Superficially, this failure to coordinate a national energy policy may be explained by the fact that President Carter had only one term in office. Also superficially, the failure to achieve or even move noticeably toward transition might be explained by inadequate federal research and development. The reasons for the failure, however, run deeper. Simply, Carter's energy program conflicted with the country's entrenched model of energy policy. The attempted coordination failed because the model resists centralization and the transition failed because the model relies on the market for the signal to move into other resources.

B. President Reagan and Deregulation

If President Carter's highly centralized, progovernment energy policy failed, then President Reagan's private sector, supply-side, antigovernment deregulation efforts should have succeeded, and the DOE should have been dismantled. This scenario did not come to pass, although President Reagan has undone some of Carter's energy policies through greater federal reliance on the market and less reliance on centralized planning. Indeed, President Reagan made his energy intentions clear on January 28, 1981,[15] when, as one of his first acts in office, he decontrolled oil prices. The oil price decontrol was largely symbolic, however, because the price controls were scheduled to terminate on October 1, 1981.

Reagan did not, however, cut his deregulation program from whole cloth. Natural gas deregulation, like oil deregulation, was scheduled to occur as per the Natural Gas Policy Act of 1978 (NGPA).[16] Similarly, although

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States Synthetic Fuels Corporation Act, 42 U.S.C. §§ 8701-95 (1982); the Biomass and Alcohol Fuels Act, 42 U.S.C. § 8803 *et seq.* (1982); the Renewable Energy Resources Act, 16 U.S.C. §§ 2701-08 and 42 U.S.C. 7371-75 (1982); the Solar Energy and Energy Conservation Act, 42 U.S.C. §§ 6862-72; 8211-21; and 8281-86(b) (1982); the Geothermal Energy Act, 30 U.S.C. §§ 1101-64 (1982); and the Acid Precipitation Act, 42 U.S.C. §§ 8901-12 (1982).

14. The first transition, from wood to coal, occurred in the middle of the 19th century, and the second transition from coal to oil and natural gas started at the beginning of this century and was completed by the end of World War II. *See generally* Bupp & Schuller, *Natural Gas: How to Slice a Shrinking Pie*, in ENERGY IN THE AMERICAN ECONOMY, 1850-1975: AN ECONOMIC STUDY OF ITS HISTORY AND PROSPECTS 45-143 (S. Schurr & B. Netschert eds. 1960).

15. Exec. Order No. 12,287, 3 C.F.R. §§ 124-25 (1981).

16. Pub. L. No. 95-621, 92 Stat. 3352 (codified at 15 U.S.C. §§ 3301-3342 (1982)).

President Reagan campaigned to dismantle the United States Synthetic Fuels Corporation, the synfuels program failed because the market was unable to support it. Synfuels producers were not able to process coal into natural gas or to reap oil from tar sands or oil shale at a cost competitive with oil and natural gas on the market.[17] Although coal conversion legislation, the Powerplant and Industrial Fuel Use Act of 1978,[18] was largely repealed[19] during the Reagan Administration, the administration cannot be credited with a major deregulatory victory. Coal conversion legislation dating back to President Nixon has been judged to be ineffective.[20]

Perhaps the Reagan Administration's most significant energy legislation was the ill-titled Electric Consumer Protection Act of 1986 (ECPA).[21] The ECPA amends Part I of the Federal Power Act,[22] which licenses federal hydroelectric power projects. The amendments are intended to price hydropower at a competitive market price rather than at a price based on the federal government's embedded costs in constructing and operating the dams, and by eliminating "preferences" (price discounts) to municipalities. Presently under the EPCA, municipalities must compete with private utilities in purchasing federal hydropower.[23]

President Reagan, like every other president since Lyndon Johnson, campaigned against big government. Reagan's campaign differed, however, by singling out the DOE among other agencies,[24] for abolition. The DOE was to be abolished as part of Reagan's supply-side economic deregulation program. Obviously, Reagan was unsuccessful, because the DOE continues its bureaucratic life. The DOE's continued existence and Reagan's failure to deregulate energy in substantial ways may be explained by the general intransigence of bureaucracies. This explanation, however, is too pat, too superficial. Like the explanation for Carter's failure to centralize national energy planning, a more refined explanation can be found in the dominant model of energy regulation. The model shows that government regulation

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17. *See, e.g.*, U.S. GEN'L ACCT. OFFICE, SYNTHETIC FUELS, STATUS OF THE GREAT PLAINS COAL GASIFICATION PROJECT GAO/RCED-88-53FS (November 1987) (synfuels project not financially feasible).

18. Pub. L. No. 95-620, 95 Stat. 3291 (codified at 42 U.S.C. §§ 8301-8484 (1982)).

19. Pub. L. No. 100-42, 101 Stat. 310 (1987).

20. According to a DOE report, for example, between January 1, 1983 and December 31, 1985, the DOE granted all requests for exemptions to the Fuel Use Act. *See Natural Gas Legislation: Hearing Before the Subcomm. on Energy Regulation and Conservation of the Senate Comm. on Energy and Natural Resources,* 99th Cong., 2d Sess. 208-221 (April 15, 1986); Robertson, *The Powerplant and Industrial Fuel Use Act of 1978: Fuel Replacement,* 3 HARV. ENVT'L L. REV. 214 (1979).

21. Pub. L. No. 99-495, 100 Stat. 1243 (1986). I say that the act is poorly titled because it will raise prices for municipal consumers without necessarily reducing prices for consumers of investor-owned utilities, thus protecting no consumers.

22. 16 U.S.C. §§ 792-828(c) (1982).

23. *See generally* Bomong, *The Electric Consumer Protection Act of 1986: Changes in Hydro Licensing?,* 23 GONZ. L. REV. 135 (1987-88).

24. The Department of Education and the United States Synthetic Fuels Corporation were also earmarked for extinction.

of energy is well embedded in the country's political economy. Reagan's deregulation violated that model by relying too much on the market and too little on government support of conventional fuels and producers.

C. *The Rough Equilibrium of Energy Policy*

The energy policies of the Carter and Reagan administrations represent extremes that could not last much beyond their immediate causes. President Carter's centralization policy was a continuation of the Nixon and Ford administrations' responses to the Arab Oil Embargo, to the embargo's negative economic effects on our domestic economy, and to the threat the embargo posed to national security. Consequently, as the OPEC threat receded and as the country responded to market dislocations caused by the 1973 and 1979 embargos, extraordinary government oil controls were unnecessary. Once consumers adjusted to the price of gasoline at the pump and oil producers received accurate price signals, oil price controls lost their immediacy and their continuation adversely affected the economy.[25] Similarly, once artificial regulatory constraints were removed from natural gas markets, prices lowered and supplies increased, more closely reflecting market allocations.[26]

The genesis of Reagan's energy policies differed from Carter's. Where Carter's policies were stimulated by the exogenous events of the global oil market, Reagan's prescriptions were the endogenous manifestations of his ideologically motivated supply-side economics. Yet, Reagan's policies did not result in the complete deregulation of energy. While oil has undergone successful price and allocation deregulation and most natural gas prices have been deregulated, OPEC's power to control supplies has diminished, with a consequent fall in prices and a rise in the call for oil import quotas.[27] In addition, the key transportation segments of the natural gas and electricity industries continue to possess market power,[28] thus making deregulation unlikely and undesireable.[29]

The Carter and Reagan policies were similar in that both were inconsistent with the dominant energy policy model and with the prevailing

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25. *See* J. KALT, *supra* note 3, at 285-95. *See generally,* D. GLASNER, POLITICS, PRICES, AND PETROLEUM: THE POLITICAL ECONOMY OF ENERGY (1985).

26. *See* S. BREYER, REGULATION AND ITS REFORM ch. 13 (1982); M.E. SANDERS, THE REGULATION OF NATURAL GAS: POLICY AND POLITICS, 1938-78 ch. 7 (1981); A. TUSSING & C. BARLOW, THE NATURAL GAS INDUSTRY : EVOLUTION, STRUCTURE, AND ECONOMICS ch.9 (1984).

27. *See* W. HOGAN & B. MOSSAVAR-RAHMANI, ENERGY SECURITY REVISITED (1987); *National Oil Security Policy, Hearing before Subcomm. on Energy Regulation and Conservation of the Senate Comm. on Energy and Natural Resources,* 100th Cong., 1st Sess. (June 2, 1987).

28. *See infra* note 38 (defining market power).

29. *See, e.g.,* Broadman, *Deregulating Entry and Access to Pipelines,* in DRAWING THE LINE ON NATURAL GAS REGULATION 125 (J. Kalt & F. Schuller eds. 1987) (natural gas pipelines have market power); P. JOSKOW & R. SCHMALANSEE, MARKETS FOR POWER: AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION (1983) (market power exhibited in transmission sector of electricity industry).

market. The dominant model requires the government to support conventional resources while recognizing that some segments of energy industries possess enough market power to require regulation. In the prevailing market, OPEC is not able to hold the supply line in oil, the NGPA opened up natural gas supplies, and the price elasticity of demand for electricity is more elastic than analysts previously thought. Therefore, oil, natural gas, and electricity supplies are more abundant than many dire prophets in the mid-1970s predicted. This energy abundance can be traced to market forces that government oversight has stabilized. The abundance was no more a product of Reagan's deregulation politics than it was a result of Carter's central planning. Rather, stable energy production, distribution, and consumption are consequences of the interplay of government and industry within relatively narrow limits of a mixed-market political economy.[30]

Without overstating the case, the country has an industrial policy of sorts regarding energy production, distribution, and consumption. The key to understanding the political economy of energy is to recognize the tight interrelationship between government and industry.[31] This symbiotic relationship between government and industry is manifest by four characteristics. First, energy resources are interconnected so that the regulation of one affects the supply or demand of another. Oil and electricity, for example, divide the energy pie into two approximately equal halves that do not greatly overlap. Electricity does not occupy much of the transporation sector and oil is not the most economic resource to burn to produce electricity. Therefore, federal energy policy can support both oil and electricity production. A second characteristic of the government-industry relationship is that energy resources are susceptible to interfuel competition. A federal policy that promotes the use of coal to generate electricity simultaneously discourages the use of nuclear power for the same purpose. A third characteristic is that industry and government depend on each other for the distribution and allocation of benefits and burdens. The federal government, for example, controls most of the new oil reserves but depends on private industry for their development. Likewise, the oil industry, despite its frequent *laissez-faire* posturing, is not above asking for the helping hand of government in the form of oil import quotas. A final characteristic of the relationship between government and industry is that both business and government are stimulated by market disequilibria. The embargo prompted the government's oil price controls. The loosening of federally established prices resulted in business' increased exploration for natural gas. This interplay between government and industry has produced a dominant model of domestic energy policy.

Domestic energy policy favors large-scale, high technology, capital intensive, integrated, centralized firms for the production and distribution of

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30. *See generally* C. LINDBLOM, POLITICS AND MARKETS: THE WORLD'S POLITICAL-ECONOMIC SYSTEMS (1977).

31. *See* D. VIETOR, *supra* note 1, at 1-12.

energy.[32] The policy favors these archetype energy firms over alternatives, such as small solar or wind firms, because energy policymakers believe that the larger firms can continue to realize economies of scale. Policymakers gamble that the archetype firms, rather than alternative firms, can achieve greater energy efficiencies through technological innovation, discovery of new reserves, or discovery of new energy sources. This belief may or may not be true. Nevertheless, the belief persists and the favoritism will continue as alternative firms carry the burden of persuading policymakers otherwise. Put another way, as long as energy production, consumption, and prices remain stable, the embedded policy will continue.

A federal energy policy favoring traditional forms of energy production over alternative sources and new technologies is based on the assumption that there is a positive correlation between energy use and economic growth[33] (the energy-GNP link).[34] While the correlation is not a one-to-one correlation,[35] economic productivity tends to increase with an increase in energy production. The resulting energy policy has the following general goals:

(1) to assure abundant supplies;[36]
(2) to maintain reasonable prices;[37]
(3) to limit the market power of archetype firms;[38]

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32. For a discussion of the role of fossil fuels in domestic enery production and consumption, see *infra* note 40. For a discussion of the type of energy producers favored, see A. LOVINS, SOFT ENERGY PATHS: TOWARD A DURABLE PEACE 1-31 (1977).

33. *See, e.g.*, Berndt & Wood, *Energy Price Shocks and Productivity Growth: A Survey*, in ENERGY: MARKETS AND REGULATION—ESSAYS IN HONOR OF M. A. ADELMAN 305-42 (R. Gordon, H. Jacoby & M. Zimmerman eds. 1987); NATIONAL ENERGY STRATEGIES PROJECT, ENERGY IN AMERICA'S FUTURE: THE CHOICES BEFORE US ch. 3 (1979); *see also* G. BARNEY, THE GLOBAL 2000 REPORT TO THE PRESIDENT OF THE U.S. (1980); J. SIMON & H. KAHN, THE RESOURCEFUL EARTH (1984). *But see* A. LOVINS, *supra* note 32, at 7-11.

34. Please note that the statement that there is an energy-GNP link is not meant to encompass the further inference that greater economic productivity and more energy production necessarily means an improvement in general welfare. Bigger may be better, however, that is a normative claim that I am not prepared to make, let alone defend. The energy-GNP link is intended as a positive not a normative assertion.

35. Yergin, *Conservation: The Key Energy Source*, in ENERGY FUTURE 141-42 (R. Stobaugh & D. Yergin eds. 1979).

36. Today, a healthy availability of energy resources means that the lights go on when the switch is flipped; the car starts when the key is turned; and the air conditioning works. *See id.* at 144-48.

37. A corollary of the energy-GNP link is stability in energy prices. As long as the real price of energy is stable, then productivity is stable because a larger portion of income is not expended on energy. With the exception of the decade between 1973 and 1983, approximately, energy prices generally have been stable since the beginning of the century. *See* U.S. DEP'T OF COMMERCE, HISTORICAL STATISTICS OF THE UNITED STATES: COLONIAL TIMES TO 1957 (1960) (see series G 244-330 and 353-426); U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 1984 (1983) (Table 985); U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 1987 (1986) (Table 941); ENERGY INFORMATION AGENCY, ANNUAL ENERGY REVIEW 1987 DOE/EIA-0384(87) (May 1988) (Table 22).

38. "Market power" can be variously defined: "[T]he ability of a firm (or a group of firms, acting jointly) to raise price above the competitive level without losing so many sales

(4) to promote inter- and intrafuel competition;[39]
(5) to support a limited number of conventional fuels (oil, natural gas, coal, hydropower, and nuclear power);[40] and
(6) to allow energy decisionmaking and policymaking to develop within an active federal-state regulatory system.[41]

This loose policy can be contrasted with a comprehensive national energy plan. Although Congress requires the president to submit a biennial national energy plan, which the DOE submits,[42] the country has never had a single end-state energy plan with articulated and coordinated goals and objectives. Instead, the country has always had a series of policies pertaining to individual industries.[43] Combined, these separate policies share the six goals mentioned above and together they are consistent with the traditional and prevailing market-oriented pluralism, or the democratic capitalism, of our political economy.

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so rapidly that the price increase is unprofitable and must be rescinded." Landes & Posner, *Market Power in Antitrust Cases,* 94 HARV. L. REV. 937 (1981); *see also* United States v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956) ("Monopoly power is the power to control prices or exclude competition."); W. BALDWIN, MARKET POWER, COMPETITION, AND ANTITRUST POLICY 3 (1987) ("[T]he abilities of firms to influence the prices of their products either through independent actions or through actions coordinated with others"); Comments, *Landes and Posner on Market Power: Four Responses,* 95 HARV. L. REV. 1787-1874 (1982).

Today, market power is threatened by natural gas pipelines and electric transmission facilities. *See* Pierce, *A Proposal to Deregulate the Market for Bulk Power,* 72 VA. L. REV. 1183 (1986) (electricity transmission retains market power); Pierce, *Reconstituting the Natural Gas Industry from Wellhead to Burnertip,* 9 ENERGY L. J. 1, 16-18 (1988) (natural gas transmission retains market power); *see also supra* note 29 (noting additional sources on subject of market power).

39. *See generally* J. CLARK, *supra* note 1; D. VIETOR, *supra* note 1.

40. Most of the fuels produced and consumed domestically consist of fossil fuels like coal, natural gas, and oil. Fossil fuels are either consumed or used in the production of electricity. Nuclear power and hydropower supplement fossil fuels in the production of electricity and "alternative fuels," such as solar, wind, geothermal, or even synthetic fuels such as oil shale, do not play a major role in the country's energy picture as the following figures demonstrate.

The United States consumed 76 quads (one quad equals one quadrillion BTUs of energy) of energy in 1987. The 76 quads are divided among the following resources: coal (18.00); natural gas (17.18); oil (32.63); hydropower (3.04); nuclear power (4.92); geothermal (0.23); and other (wood, waste, wind, photovoltaic, and solar connected to electric utilities—these sources which produce energy for direct consumption are not included) (0.02). ENERGY INFORMATION AGENCY, ANNUAL ENERGY REVIEW 1987 DOE/EIA-0384(87) (1988) (Table 3 at p. 11). Production figures are similar, although somewhat lower, indicating that the country is a net importer of energy. In 1987, the country produced 64.55 quads of energy divided among the following resources: coal (20.12); natural gas (16.84); oil (17.59); natural gas liquids (2.23); hydropower (2.61); nuclear power (4.92) geothermal (0.23); and other (0.02). *Id.* (Table 2 at p. 9).

41. *See infra* part IV (discussing Supreme Court and energy federalism).

42. 42 U.S.C. § 7321 (1982).

43. *See generally* J. CHUBB, INTEREST GROUPS AND THE BUREAUCRACY: THE POLITICS OF ENERGY chs. 1, 7 (1983); B. COMMONER, THE POLITICS OF ENERGY (1979); D. DAVIS, ENERGY POLITICS (3d ed. 1982); FORD FOUNDATION, A TIME TO CHOOSE (1974); W. ROSENBAUM, ENERGY, POLITICS, AND PUBLIC POLICY (1981); Tomain, *supra* note 6.

The baseline for this federal energy policy is the market. Federal energy regulation aspires to attain the benefits of a competitive market, including wealth maximization, efficient and fair allocation and distribution of resources, and technological innovation while promoting individual liberty and equality.[44] It should come as no suprise that energy industries do not operate in such a rarified market. Instead, government regulation is necessary to reduce market imperfections and approach a state of workable competition.[45] Starting from the market baseline, energy policymakers (state and federal) mimic the market as they resist interfuel coordination and planning in favor of interfuel and intrafuel competition among a limited number of conventional resources. The embedded hard energy path favors conventional fuels such as oil, coal, natural gas, hydropower, electricity, and nuclear power, while deemphasizing both conventional and unconventional alternative energy sources.[46] Simply, it is unrealistic to assume that a radically different energy policy will emerge from this entrenched system. Thus, neither President Carter's attempt to coordinate and formulate a comprehensive and centralized national energy plan nor President Reagan's attempt to deregulate energy on a broad scale was likely to stray far from the model. Nor is it likely that federal energy policy will be transformed greatly during the Bush Administration.

The existence of a dominant energy policy does not preclude new regulatory initiatives. Indeed, it is precisely because of interactions between government and industry, between federal and state governments, and between markets and politics that energy regulation is a continuous process. The policy that emerges from these interactions tilts sometimes in favor of government and sometimes in favor of the market. Nevertheless, government and industry participation in energy policymaking stays in rough equilibrium. Currently, there are several, sometimes dramatic, energy regulations at both the state and federal levels that will influence the future development of energy policy. This Article will examine these regulations to see how closely they adhere to the dominant model.

III. Federal Regulation and the Market

Since the beginning of the 1980s, energy markets have moved toward equilibrium, reducing the need for radical executive and congressional intervention. Nevertheless, energy regulation does not stand still. Instead, administrative agencies and courts regulate on a daily basis, away from the

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44. *See, e.g.*, F.M. Scherer, Industrial Market Structures and Economic Performance ch. 1 (2d ed. 1980). The description in the text is a slight caricature of the good life in the market.

45. *See, e.g.*, Bailey & Baumol, *Deregulation and the Theory of Contestable Markets*, 1 Yale J. on Reg. 111 (1984).

46. "Alternative energy sources" can be divided into conventional substitutes and renewable resources. Conventional substitutes would include such resources as oil shale, tar sands, and coal gas, which are intended to supplement and substitute for oil and natural gas. Renewable resources would include solar, wind, and biomass.

more political branches. Contemporary federal energy regulation, particularly of the natural gas and electric industries, is occurring most noticeably at the Federal Energy Regulatory Commission (FERC). The simple theme for FERC regulation is competition. From FERC's energy policy perspective, relative abundance and low prices indicate increasing competition in the natural gas and electricity markets. FERC is trying to move the pricing and allocation decisions of both industries away from administrative law judges and toward market-based mechanisms.

A. FERC Natural Gas Initiatives

Recent FERC natural gas regulation has been called nothing less than revolutionary.[47] Through a series of rulemaking orders as interpreted by the influential United States Court of Appeals for the D.C. Circuit, the natural gas industry is facing its most significant restructuring since the Natural Gas Policy Act of 1978 (NGPA).[48] Indeed, these FERC orders rank in historical importance with the passage of the Natural Gas Act in 1938,[49] the 1954 *Phillips Petroleum Co. v. Wisconsin*[50] decision, and, of course, the NGPA. If implemented successfully, FERC's rulemaking orders will constitute an unprecedented restructuring of an industry by an administrative agency without a new legislative mandate.

The revolution in natural gas regulation was provoked by a market dislocation. In the mid-1970s, the regulations which created dual (federal and state) natural gas markets,[51] and price rises attributable to the oil embargos, caused shortages which resulted in two regulatory events. First, Congress passed the NGPA, which had the avowed purpose of stimulating production while cushioning consumers from gross price shocks.[52] The NGPA was to accomplish this objective by unifying federal and state markets and through phased deregulation of wellhead prices, even though the NGA controlled about fifty percent of natural gas prices.[53]

The second regulatory mechanism was private ordering through contract.[54] Pipelines entered into long-term contracts with producers under

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47. Fox, *Transforming an Industry by Agency Rulemaking: Regulation of Natural Gas by the Federal Energy Regulatory Commission*, 23 LAND & WATER L. REV. 113-14 (1988); *see also* Pierce, *Reconstituting the Natural Gas Industry from Wellhead to Burnertip*, 9 ENERGY L.J. 1 (1988).

48. Pub. L. No. 95-621, 92 Stat. 3351 (codified at 15 U.S.C. §§ 3301-3432 (1982)); *see also,* Allison, *Natural Gas Pricing: The Eternal Debate,* 37 BAYLOR L. REV. 1 (1985).

49. 15 U.S.C. §§ 717 *et seq.* (1982).

50. 347 U.S. 672 (1954).

51. *See* S. BREYER, *supra* note 26; S. BREYER & P. MACAVOY, ENERGY REGULATION BY THE FEDERAL POWER COMMISSION (1974); M.E. SANDERS, *supra* note 26; A. TUSSING & C. BARLOW, *supra* note 26; Breyer & MacAvoy, *The Natural Gas Shortage and the Regulation of Natural Gas Producers,* 86 HARV. L. REV. 941 (1973).

52. Allison, *supra* note 48.

53. *See* Pierce, *supra* note 47, at 11; *see also* Allison, *supra* note 48; Note, *Legislative History of the Natural Gas Policy Act: Title I,* 59 TEX. L. REV. 101 (1980).

54. *See* Pierce, *Natural Gas Regulation, Deregulation, and Contracts,* 68 VA. L. REV. 63 (1982).

which the pipelines were obligated to take-or-pay for up to ninety-five percent of the contract amount of natural gas.[55] When gas is in short supply, take-or-pay contracts with high take percentages work a fair exchange. The pipeline has a reliable supplier and the producer has a reliable cash flow for exploration and production. In the mid-1970s, a gas shortage forced pipelines to curtail supplies, making take-or-pay contracts attractive.[56] Unfortunately, when an abundance of gas developed in the 1980s, high take-or-pay obligations prevented pipelines from shopping around for lower priced natural gas, thus distorting the market.

The gas market was so distorted in the 1980s that while energy prices were falling generally, natural gas prices were not, despite a decline in demand. Consequently, this situation created a surplus of natural gas. This market dislocation, together with the NGPA's regulatory response, had severe adverse consequences:

> From 1978 through 1987, the NGPA has had extremely unfavorable effects on all segments of the industry. Consumer prices have been well above the level that would exist in a competitive market. At the same time, the existence of a large surplus of gas throughout the period has forced the shut in of many gas supplies and has driven a large number of gas producers into bankruptcy. Simultaneously, interstate pipelines have incurred contractual liabilities of $11.7 billion for gas they are obligated to pay for but unwilling to take because the market will not permit them to sell gas in the volumes and at the prices to which they are committed by contract.[57]

Even with an oversupply of natural gas, the cheaper gas could not get to market because pipelines were locked into inefficient contractual obligations. Not surprisingly, courts did not rush in to rewrite contracts for such sophisticated parties and were content to let risk fall according to where the parties contractually assigned it.[58]

To take advantage of the emerging market, pipelines, producers, and consumers all petitioned FERC for relief. Through minimum billings, pipelines tried to insure their cash flow to pay their fixed and variable costs. Pipelines also tried to get access to the surplus market through special marketing programs. Producers simply wanted to get their gas to market and supported the special marketing programs. Consumers, naturally, tried

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55. *See* Medina, McKenzie & Daniel, *Take or Litigate: Enforcing the Plain Meaning of the Take-or-Pay Clause in Natural Gas Contracts,* 40 ARK. L. REV. 185 (1986).

56. *See* North Carolina v. Federal Energy Regulatory Comm'n, 584 F.2d 1003 (1978) (discussing legality of curtailment policies); 15 U.S.C. §§ 3391-94 (1982) (NGPA curtailment policies).

57. Pierce, *supra* note 47, at 11 (footnotes omitted).

58. *See, e.g.,* Wagner & Brown v. ANR Pipeline Inc., 837 F.2d 199 (5th Cir. 1988) (upholding district courts' dismissal of take-or-pay action deferring to primary jurisdiction of FERC); Golsen v. Ong Western, Inc., 756 P.2d 1209 (Okla. 1988) (take-or-pay liability not extinguished by *force majeure* clause).

to avoid the imposition of "minimum bills" under which gas was more costly than its market value. Also, some consumers protested the new marketing programs from which they were excluded. There was a double sting to the exclusion from the new marketing programs. Not only were some, usually residential, consumers not able to buy the cheaper gas, they also had to pay a higher portion of fixed costs not absorbed by the beneficiaries of the new programs.

In response to these requests and to changing market conditions, FERC attempted to loosen price, entry, and exit controls for the purpose of letting gas flow more smoothly through the distribution system from producer to end-user or, in industry jargon, from wellhead to burnertip. Clearly, pipelines were the bottleneck in the natural gas fuel cycle. Thus, pipelines were the target of FERC regulatory efforts.[59]

The first notable response to the new gas market was the "special marketing program" (SMP) in which FERC blessed an interstate pipeline's attempt to move cheaper natural gas to fuel-switchable end-users, usually industrial customers, at discounted rates.[60] Discounting makes sense from the pipeline's perspective as well as from the customer's. The pipeline can retain old customers and attract new ones by making cheaper gas available. Unfortunately, some customers, like local distribution companies (LDCs—the local public utility) which serve residential consumers and small businesses, have a difficult time switching fuels or suppliers. Not only are LDCs and their customers[61] stuck with the higher priced natural gas, they may be forced to pick up the additional fixed costs that are not covered by the discounted rate. The SMPs were judicially invalidated for precisely this reason. Captive customers (residential users and small businesses) did not have access to lower priced natural gas.[62] FERC had the right idea with the SMP, but it failed to execute it in a nondiscriminatory way.

Along with SMPs, FERC engaged in a series of rulemakings aimed at making the natural gas market more competitive. Depending on who's position you accept, these rulemakings will either revolutionize the natural gas industry or result in chaos and confusion. The first significant rulemaking was FERC Order No. 380,[63] in which FERC declared that minimum

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59. *See* Pierce, *Reconsidering the Roles of Regulation and Competition in the Natural Gas Industry*, 97 HARV. L. REV. 345 (1983) (questioning need for pipeline regulation in today's market); Note, *Is Natural Gas Pipeline Regulation Worth the Fuss?*, 40 STAN. L. REV. 753 (1988) (same).

60. Columbia Gulf Transmission Co., 25 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,220 (1983).

61. While LDCs can pass the higher cost of natural gas through to their customers, the high prices will reduce demand, thus reducing LDC profits. Therefore, neither LDCs nor their customers were happy with the SMP.

62. *See* Maryland People's Counsel v. Federal Energy Regulatory Comm'n, 761 F.2d 768 (D.C. Cir. 1985) (MPC *I*); 761 F.2d 780 (D.C. Cir. 1985) (MPC *II*); 768 F.2d 450 (D.C. Cir. 1985) (MPC *III*).

63. Elimination of Variable Costs from Certain Natural Gas Pipeline Minimum Commodity Bill Provisions, Order No. 380, Midwestern Gas Transmission Co., 26 Fed. Energy

commodity bills, which guaranteed the pipeline's recovery of fixed and variable costs (including take-or-pay payments by the pipeline), were unjust and unreasonable under the Natural Gas Act.

In Order No. 380, FERC held that the variable cost component of a minimimum bill was anticompetitive because pipelines would try to recoup these costs from some customers[64] and not from others. This generic rulemaking prohibited the variable cost component. Later, in individual proceedings, FERC ruled on, and invalidated, fixed cost minimum bills.[65]

Minimum billing restricted competition by limiting the ability of gas purchasers to swing from one supplier to another. FERC reasoned that automatic pass through of high gas costs due to take-or-pay liability in times of plenty was unjust and unreasonable.[66] The United States Court of Appeals for the D.C. Circuit upheld the restrictions on minimum billing, but noted that Order No. 380 did not adequately address the take-or-pay problem.[67] Although the order prohibited pipelines from passing some variable costs[68] to some customers, it did not relieve pipelines from their contractual obligations to producers at the other end of the distribution system.

FERC has been grappling with the take-or-pay issue through a series of very complicated rulemakings and associated litigation which is, as yet, unresolved and unlikely to be resolved in the near term. These rulemaking efforts are intended to open up the natural gas market and, because pipelines form a natural bottleneck in the distribution system, the rulemakings were aimed at the pipelines. More specifically, following the lead of the SMP, the new regulations attempted a better utilization of the transportation portion of pipeline business[69] and a move toward open access of pipelines.

Reg. Comm'n Rep. (CCH) ¶ 61,318 (1984); *see also* Order No. 380-A, 28 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,175; Order No. 380-C, 29 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,077; Order No. 380-D, 29 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,332 (1984).

64. Specifically, pipelines would try to recoup these costs from partial requirements customers. A partial requirements customer is a customer who buys only a portion of its energy needs from the pipeline.

65. Transwestern Pipeline Co. v. Federal Energy Regulatory Comm'n, 820 F.2d 733 (5th Cir. 1987) (affirming FERC's elimination of pipeline company's fixed costs as unjust and unreasonable), *cert. denied,* 108 S. Ct. 96 (1988).

66. FERC derives its power to declare contract provisions unjust and unreasonable from the Natural Gas Act, 15 U.S.C. §§ 717c and 717d (1982). *See* Office of Consumers' Counsel v. Federal Energy Regulatory Comm'n, 783 F.2d 206 (D.C. Cir. 1986) (OCC *I*); 826 F.2d 1136 (D.C. Cir. 1987) (OCC *II*); 842 F.2d 1308 (D.C. Cir. 1988) (OCC *III*) (finding certain contract provision including take-or-pay provisions unreasonable and violative of § 5 of NGA).

67. Wisconsin Gas Co. v. Federal Energy Regulatory Comm'n, 770 F.2d 1144 (D.C. Cir 1985), *cert. denied,* 476 U.S. 1114 (1986).

68. Fixed cost provisions of minimum billings were addressed in individual proceedings. *See, e.g.,* Transwestern Pipeline Co. v. Federal Energy Regulatory Comm'n, 820 F.2d 733 (5th Cir. 1987).

69. Pipelines perform two functions: they either buy gas from producers and then transport and sell it to customers, or they simply transport gas to customers who have already purchased it from pipelines or other marketers. When pipelines buy and sell to customers this is known as a "bundled transaction." An "unbundled transaction" occurs when pipelines only transport the gas.

Pipelines serve two functions: (1) They buy gas from producers and then market the gas to customers; or (2) they transport gas that the pipeline's customers have purchased from producers. In Order No. 436[70] the FERC proposed to open access for captive customers and others who find it difficult to switch by separating pipelines' merchant and transportation roles. According to Professor William Fox, Order No. 436 has four objectives:

(1) Non-discriminatory transportation for all shippers if a pipeline volunteers to open access;
(2) relaxed ratemaking treatment of piplines' take-or-pay buyout agreements;
(3) expedited and easier treatment for some new construction and abandonments; and
(4) price protection for some customers of pipelines which enjoyed the advantages of "old" gas.[71]

Every element of the natural gas industry challenged Order No. 436. In *Associated Gas Distributors v. Federal Energy Regulatory Commission,*[72] the United States Court of Appeals for the D.C. Circuit remanded Order No. 436 to FERC for FERC's failure to relieve pipelines from their take-or-pay burdens. *Associated Gas Distributors* is a landmark decision for natural gas regulation. Although the case did result in a remand, the opinion largely accepted FERC's regulatory efforts. The D.C. Circuit upheld FERC's jurisdiction to promulgate open access provisions as long as the provisions were nondiscriminatory. The court also sustained the order's flexible rate treatment which allows pipelines to set rates within a zone of reasonableness and to give discounts rather than have the pipelines tied to a single cost-based rate.[73] More innovatively, the D.C. Circuit upheld regulations which,

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70. *See* Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, 50 Fed. Reg. 42,408 (1985) (Order No. 436), *modified,* 50 Fed. Reg. 52,217 (1985) (Order No. 436-A), *modified,* 51 Fed. Reg. 6,398 (1986) (Order No. 436-B).

71. Fox, *supra* note 47, at 125. Professor Pierce characterizes the "voluntariness" of the transportation provisions of Order No. 436 as follows:

> The effect of Order No. 436 on any pipeline that becomes an equal access carrier is to force the pipeline to compete with others—producers, other pipelines and gas marketing companies—in the sales market. As a result, the pipeline no longer has monopoly power in the sales market, the monopoly rationale for regulating pipeline sales is eliminated, and the pipeline no longer can use regulation of the sales market as a means of protecting itself from competition.

Pierce, *supra* note 47, at 25 (footnotes omitted); *see also* Griggs, *Restructuring the Natural Gas Industry: Order No. 436 and Other Regulatory Initiatives,* 7 ENERGY L. J. 71 (1986).

72. 824 F.2d 981 (D.C. Cir. 1987), *cert. denied,* 108 S. Ct. 1469 (1988).

73. FERC is experimenting with a form of "Ramsey" rates. Professor Pierce explains:

> The FERC undertakes this task in Order No. 436 by adopting Ramsey pricing principles for pipeline transportation. A pipeline can charge any rate between a ceiling based on its fully allocated cost of transportation and a floor based on its variable cost. The difference between the two is, in aggregate, the pipeline's fixed costs, and the amount by which the rate charged a customer exceeds the floor is

under certain circumstances, allow pipeline customers to modify their contracts with pipelines unilaterally by converting a percentage of their contract demand from a gas purchase obligation to an "unbundled" transportation obligation. Finally, the court remanded the order to FERC because the "Commission's apparent insousiance on take-or-pay taints the package."[74]

After being rebuffed by the court three times for not adequately handling the take-or-pay issue,[75] FERC responded with Order No. 500.[76] Natural gas lawyers Sheila Hollis and Edward LeDuc point out that the 500 series of FERC orders intends to remedy the defects of Order No. 436. Hollis and LeDuc assert that in *Associated Gas Distributors,* the United States Court of Appeals for the D.C. Circuit noted that the 500 series remedies the defects by:

(1) providing that an open-access pipeline may refuse to transport producer-owned gas unless the producer offers the pipeline a take-or-pay credit;
(2) adopting two alternative mechanisms for pipeline recovery of past buy-down or buy-out of take-or-pay liabilities;
(3) establishing principles for earlier recovery of future gas supply charges; and
(4) eliminating the contract demand reduction.[77]

Order No. 500 splits take-or-pay liability among customers,[78] pipelines, and producers. According to FERC Chair Martha Hesse, the underlying philosophy of Order No. 500 is " 'spreading the pain,' to the end of making open access 'a fact of life in the gas industry.' "[79]

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that customer's contribution to the pipeline's fixed costs.

Pierce, *supra* note 47, at 25 (footnotes omitted). *But see* Farmers Union Central Exchange, Inc. v. Federal Energy Regulatory Comm'n, 734 F.2d 1486 (D.C. Cir. 1984) (court remanding for reconsideration FERC's "flexible" rate scheme for oil pipeline because of failure to justify that rates will be just and reasonable).

74. Associated Gas Dist. v. Federal Energy Regulatory Comm'n, 824 F.2d 981, 1044 (D.C. Cir. 1987), *cert. denied,* 108 S. Ct. 1469 (1988).

75. The D.C. Circuit has told FERC to look more closely at the take-or-pay issue in Maryland Peoples' Counsel v. Federal Energy Regulatory Commission, 761 F.2d 768 (D.C. Cir. 1985); Associated Gas Distributors v. Federal Energy Regulatory Commission, 824 F.2d 981 (D.C. Cir. 1987), *cert. denied,* 108 S. Ct. 1469 (1988); and Consolidated Edison Co. of New York v. Federal Energy Regulatory Commission, 823 F.2d 630 (D.C. Cir. 1987) (1985 FERC abandonment policy remanded because it contained same "pervasive defect" of avoiding take-or-pay issue found in Order No. 380 and Order No 436).

76. *See* Regulation of Natural Gas After Partial Wellhead Decontrol, 52 Fed. Reg. 30,334 (1987) (Order No. 500), *modified,* 52 Fed. Reg. 39,507 (1987) (Order No. 500-A), *modified,* 52 Fed. Reg. 39,630 (1987) (Order No. 500-B), *modified,* 52 Fed. Reg. 48,986 (1987) (Order No. 500-C), *modified,* 53 Fed. Reg. 8,439 (1988) (Order No. 500-D).

77. Hollis & LeDuc, *Order No. 500 et al.: The FERC's Long and Winding Road to Take-or-Pay Resolution,* 2 NAT. GAS LAW. J. 1, 11 (Mar. 1988).

78. *See* Romo, *A Natural Gas Policy Update — Spreading the Pain: Part II,* PUB. UTIL. FORT., May 26, 1988, at 40-41 (quoting Nevada Senator Harry Reid warning pipelines that requests for residential rate increases may not be looked on with favor).

79. *See id.* at 41.

In their attempt to pry open access to markets through pipelines and to resolve the multi-billion dollar take-or-pay problem, Order Nos. 436 and 500 form the heart of the regulatory revolution in the natural gas industry. Still, FERC has been active on other fronts, moving toward the same objective of promoting a more competitive natural gas market. In Order No. 451,[80] FERC effectively extended price deregulation to "old" gas by setting a price ceiling above current market prices. The price ceiling allowed prices to fluctuate as if a workably competitive market was determining prices. Order No. 451 also creates a regulatory mechanism for producers and purchasers to renegotiate their gas purchase contracts in light of the gas surplus.[81] Finally, Order No. 451 eliminates "vintaging," which has been ascribed as the cause of the gas shortages in the 1970s and high gas prices in the 1980s.[82]

Recent Order No. 490[83] moves gas regulation in another direction. With Order No. 490, FERC proposes to make abandonment easier and to encourage production and a national market,[84] thus loosening the Natural Gas Act's market entry and exit restrictions.[85] FERC reasoned that as a result of conditions that the NGPA created, "continuation of the service obligation after the contract has expired is no longer required by the public convenience and necessity because it prevents market forces from operating efficiently."[86] Order No. 490, then, is intended to reduce federal regulation of entry and exit from the market and to supplement the limited federal regulation with private contract.

Finally, and most recently, FERC issued a final rule, Order No. 497,[87] aimed at curbing anticompetitive marketing practices. Specifically, the order prohibits an interstate pipeline providing transportation services from giving preferential treatment to an affiliated marketer.[88] With a surplus of natural

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80. 51 Fed. Reg. 22,168 (1986); *see also* Shoneman & McConnell, *FERC Order No. 451: Freedom (Almost) for Old Gas,* 7 ENERGY L. J. 299 (1986).

81. This rule is also under current judicial review in Mobil Exploration Co. v. Federal Energy Regulatory Comm'n, Docket No. 86-4950 (5th Cir. 1986).

82. "Vintaging" was a pricing concept developed during the setting of national rates by rulemaking. Its simplest formulation is a two-tier system in which rates for "old gas," *i.e.,* gas produced before a certain date, were set at a low level generally reflecting the embedded (or historic) cost of producing that gas. "New gas," gas produced after a certain date, would be priced higher in order to encourage producers to invest money in gas exploration and production. Unfortunately, the old gas prices were generally below the marginal cost of the gas being produced and, therefore, this pricing system discouraged production. *See* Pierce, *supra* note 47, at 28-29; *see also* Shoneman & McConnell, *supra* note 80.

83. FERC Order No. 490, 53 Fed. Reg. 4121 (1988) (18 C.F.R. Part 157).

84. *See* 15 U.S.C. § 717f(c) (1982) (certificate of public convenience and necessity is entry requirement); 15 U.S.C. § 717f(b) (1982) (abandonment approval is exit restriction).

85. *See* FERC Order No. 490-A, Abandonment of Sales and Purchases of Natural Gas Under Expired, Terminated, or Modified Contracts, 53 Fed. Reg. 29,002 (1988) (18 C.F.R. Part 157) (order denying rehearing and clarifying final rule).

86. *Id.* at 29,003.

87. 53 Fed. Reg. 22,139 (1988) (18 C.F.R. Parts 161, 250, 284).

88. *See* Midwest Gas Users Ass'n v. Federal Energy Regulatory Comm'n, 833 F.2d 341 (D.C. Cir. 1987).

gas, the gas marketing segment of the industry mushroomed. Gas marketers act as middlemen between producers and sellers as the marketers try to take advantage of the large spot market in gas. As long as marketers are unaffiliated with pipelines, the market should work more or less smoothly, although this has not been the case with affiliated marketers. Order No. 497 wants to curb abuses by affiliate marketers.

With Order No. 497, the FERC revolution has come full circle. The agency has moved from a situation in which regulations impeded the free flow of natural gas in a market of abundance and artificial price ceilings to a situation approaching a free market. Segments of the industry with anticompetitive market power, most notably interstate pipelines, threaten this free market. Order No. 497, then, is symbolic of the contemporary circumstance in which deregulation of one segment of the fuel cycle leads directly to reregulation, rather than to no regulation at all.

B. FERC Electricity Initiatives

From the end of World War II until the late 1960s, the electricity market remained stable. During this period, demand grew at a predictable seven percent per annum, thus making capacity planning easy. Since the mid-1970s, however, the electricity market has experienced a radical transition. First, the rate of growth in demand has fluctuated and declined appreciably as the price of electricity increased.[89] Today, demand averages between two percent and three percent per year.[90] Second, an industry that was once thought to exhibit characteristics of inelastic demand demonstrated that it was more elastic than once believed.[91] The direct consequence of an historic linear seven percent growth rate and a current two to three percent growth with elastic demand was that electric utilities found themselves with excess capacity.[92] Public utility commissions and state legislatures responded by passing regulations and legislation shielding consumers from paying for capital investment that yielded no electricity.[93] The consensus interpretation

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89. Between 1930 and 1970, growth in demand for electricity averaged 7 percent annually. Between 1970 and 1983, in contrast, the annual growth rate dropped off to 2.5 percent. Since 1982, net electric generation has grown at an average rate of 2.6 percent per year. *See* CONGRESSIONAL BUDGET OFF., FINANCIAL CONDITION OF THE U.S. ELECTRIC UTILITY INDUSTRY (1986); DEPARTMENT OF ENERGY INFO. AGENCY, ELECTRIC POWER ANNUAL (1986).

90. Yokell & Voilette, *Market Structure and Opportunities in the Electric Utility Industry Today,* PUB. UTIL. FORT. Jan. 7, 1988, at 9.

91. *Compare* K. HOWE & E. RASMUSSEN, PUBLIC UTILITY ECONOMICS AND FINANCE 20 (1982) (asserting that electricity industry is inelastic) *with* P. JOSKOW & R. SCHMALENSEE, MARKETS FOR POWER: AN ANALYSIS OF ELECTRIC UTILITY DEREGULATION 156 (1985) (noting that electricity industry is elastic) *and* L. HYMAN, AMERICA'S ELECTRIC UTILITIES: PAST PRESENT, AND FUTURE 43 (2d ed. 1985) (same).

92. *See* A. KAUFMAN, K. KELLY & R. HEMPHILL, COMMISSION TREATMENT OF OVERCAPACITY IN THE ELECTRIC POWER INDUSTRY (1984).

93. *See* D. ANDERSON, REGULATORY POLITICS AND ELECTRIC UTILITIES: A CASE STUDY IN POLITICAL ECONOMY (1981) (describing proconsumer shift in public utility commissions due to change in market); W. GORMLEY, THE POLITICS OF PUBLIC UTILITY REGULATION (1983) (same);

of these market changes is that the electricity market is becoming more competitive. Excess capacity, slowed growth in demand, greater price elasticity of demand, new entrants in the generation end of the fuel cycle,[94] and merger, acquisition, and spin-off activities all evince a competitive climate never seen before in the electricity industry.[95]

However, a paradox accompanies increased competition. Although more options are available for the generation of electricity on the supply side, and although consumers have more options to choose from on the demand side, these options are not available to all consumers. Specifically, purchasing flexibility exists for large industrial consumers but does not filter down to smaller customers:

> Yet those smaller, captive, residential and commercial customers will bear increased costs and reliability burdens created by those who are granted such purchasing flexibility.
> * * *
> By ensuring service to captive customers who are unable to leave the system . . . utilities will incur higher costs. These costs will make them less likely to compete with their unregulated counterparts for the more profitable segments of the market. This in turn will make it increasingly difficult to serve their customers economically.[96]

Stimulated by the growingly competitive market and the attendant complications, FERC has been very active on the electricity side of its docket. In a controversial[97] series of proposed rulemakings, FERC is gravitating toward greater reliance on market-like competition. The market-like competition is expected to align more closely supply, demand, and price, rather than have prices artificially set by federal or state regulators.

FERC's free market favoritism is theoretically sound. However, there are structural impediments in the electricity industry, just as there are structural impediments in the natural gas industry, that make complete

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P. NAVARRO, THE DIMMING OF AMERICA: THE REAL COSTS OF ELECTRIC UTILITY REGULATORY FAILURE (1985) (poor regulation has contributed to underinvestment in electric plants); Olson, *Statutes Prohibiting Cost Recovery for Cancelled Nuclear Power Plants: Constitutional? Pro-Consumer?*, 28 DENVER U.L. REV. 345 (1985) (discussing long-term and high-cost consequences of pro-consumer legislation).

94. *See generally* Lennon & Meyers, *Net Energy Use Impacts of PURPA Implementation*, PUB. UTIL. FORT., May 12, 1988, at 28.

95. *See* Kirsten, *Deregulation and Reorganization in the Electric Utility Industry*, PUB. UTIL. FORT., Sept. 3, 1987, at 11; O'Connor, Levin, Cahill & Keenan, *The Transition to Competition in the Electric Utility Industry*, 8 ENERGY L. & POL'Y 223 (1988); Scherer, *Powering America to a More Productive Future*, PUB. UTIL. FORT., June 9, 1988, at 17; Smartt, *The Electric Utility Executives' Forum*, PUB. UTIL. FORT., June 9, 1988, at 78; Studness, *Electric Utility Capacity Planning and U.S. Energy Policy*, PUB. UTIL. FORT. July 7, 1988, at 33.

96. Scherer, *supra* note 95, at 19.

97. *See generally* Romo, *1988: The Year the FERC Shook Electricity*, PUB. UTIL. FORT., Sept. 1, 1988, at 29.

transition from regulation to market extremely unlikely, if not completely impossible. Specifically, like the natural gas industry, the electricity industry may be able to promote more competition in the generation segment of its fuel cycle, but because the transmission segment exhibits monopoly characteristics, the government must regulate the transmission segment. The government must regulate transmission to prevent captive customers, small commercial and residential users, from being forced to absorb excess utility costs. Recent FERC activities addressing this new environment can be divided into rulemaking and transmission.

1. FERC Rulemaking

FERC's rulemaking activities aspire to two goals. First, FERC wants to stop administratively setting wholesale rates and to have something like a competitive market set the rates.[98] Second, following the successful lead of PURPA, which opened up markets in cogeneration and small power production,[99] FERC proposes to expand generation options even further.

Until the mid-1970s, virtually all electricity produced in the country came from investor-owned utilities, municipally-owned utilities, rural electric cooperatives, or federally run hydroelectric projects.[100] The "energy crisis," however, stimulated policymakers to rethink assumptions about electricity production, as well as assumptions about oil dependence. On the electricity side, policymakers tried to increase energy efficiency by encouraging conservation and by finding new, cheaper suppliers. In other words, policymakers wanted to find alternatives to traditional public utilities.

PURPA attempted to do this by creating a new electricity market. According to FERC regulations implementing PURPA, a nonutility electricity producer qualifying as a cogenerator[101] or small power producer,[102] thus becoming a "qualifying facility" (QF), is entitled to certain benefits.[103]

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98. *See, e.g.*, Barker, *A Workable Test of a Workably Competitive Bulk Power Market*, PUB. UTIL. FORT., April 14, 1988, at 13, 14. James Barker sets out a test for creating such a market:

> It is proposed that for a selling utility to qualify as a being approved to charge market-based rates for bulk power interchange and transmission service, there must be at least two other potential sellers of *comparable services* to the buying utility. Therefore, each buyer should have, at a minimum, three *viable suppliers* for a service in order to establish a workably competitive interchange market.

Id.

99. Public Utility Regulatory Policies Act, Pub. L. No. 95-617, § 210, 92 Stat. 3117, 3144-3147 (codified as amended at 16 U.S.C. § 824a-3 (1982)).

100. There are approximately 250 investor-owned electric utilities which supply about 78 percent of all electricity generated in the United States. The remaining electricity comes from approximately 2,200 electric systems owned and operated by state and municipal governments (10%); 1,000 cooperatively owned systems (2:5%); and federal agencies (10%). *See* C. PHILLIPS, THE REGULATION OF PUBLIC UTILITIES: THEORY AND PRACTICE 538-39 (1984); L. HYMAN, *supra* note 91, at 117.

101. 18 C.F.R. § 292.205 (1987).

102. 18 C.F.R. § 292.204 (1988).

103. 18 C.F.R. § 292 subpart C (1988).

The primary benefit is that utilities are obligated by law to purchase and to sell electricity to QFs at the utilities' avoided cost. Avoided cost means the cost that the utility would incur in producing a unit of electricity or the cost that the utility would incur if the utility purchased a unit of electricity from another source (i.e., the market).[104] Although FERC regulations did not require the utility to set the price at the full avoided cost,[105] that is, the cost to the utility, the Supreme Court sustained a rule requiring the full payment.[106]

If a utility charges the full avoided cost rather than something less than a utility's costs and more than a QF's costs, consumers do not benefit from this new market. However, consumers do not lose in the short run and are potential long-run beneficiaries because a new lower-priced electricity market is being created. Therefore, the law allows a QF that can produce more electricity than it needs at a cost lower than the utility's cost to make a profit on those sales.

The PURPA scheme appears successful because it brought new entrants into the market and it increased the energy efficiency of electricity production.[107] Indeed, utility critics of the full avoided cost scheme disparage the blossoming of QFs as "PURPA machines." Building on that success, FERC has issued three notices of proposed rulemaking (NOPRs) which have the potential to revolutionize the federal regulation of electricity, no less so than FERC's natural gas revolution.[108]

Two NOPRs concern avoided cost determinations. In Docket No. 88-5,[109] FERC proposes that state regulatory authorities and nonregulated

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104. 18 C.F.R. § 292.101(b)(6) (1988).

105. Until recently, FERC rules permitted states to charge rates higher than a utility's full avoided cost. Orange & Rockland Utilities, Inc., 92 Pub. Util. Rep. 4th (PUR) 1, 14 (1988). That rule has been rescinded and today states can charge rates no higher than full avoided cost. *Id.* at 4.

106. American Paper Institute, Inc. v. American Electric Power Service Corp., 461 U.S. 402, 413 (1983).

107. *See* Lennon & Meyers, *Net Energy Use Impacts of PURPA Implementation,* PUB. UTIL. FORT., May 12, 1988, at 28, 31, 33 (discussing how PURPA brought new entrants into market and increased energy efficiency of electricity production). Lennon and Meyers also find that QF electricity has reduced reliance on oil and natural gas generated electricity. *Id.* at 36-37. The "threat" of QF power, or the "threat" of the full avoided cost obligation imposed on utilities has instigated some utilities to offer "discount" rates to industrial consumers. *See* Norris, *1987 — The Year in Review,* PUB. UTIL. FORT., Jan. 7, 1988, at 42. The discount is that the utility will lower the industrial consumer's rate if the consumer agrees *not* to build a cogeneration facility. Bain, *State Regulation of "Anti-cogeneration" Contracts,* PUB. UTIL. FORT., June 23, 1988, at 43.

108. *See* 53 Fed. Reg. 9324-27 (1988) (to be codified at 18 C.F.R. pts. 35 & 293) (proposed March 16, 1988) (describing NOPR for regulations governing bidding programs); *id.* at 9327-31 (to be codified at 18 C.F.R. pts. 38 & 382) (proposed March 16, 1988) (describing NOPR for regulations concerning independent power producers); *id.* at 9331-34 (to be codified at 18 C.F.R. pt. 292) (proposed March 16, 1988) (describing NOPR for administrative determination of full avoided costs, sales of power to qualifying facilities, and interconnection facilities).

109. *See* 53 Fed. Reg. 9324-27 (1988) (to be codified at 18 C.F.R. pts. 35 & 293) (proposed March 16, 1988).

electric utilities implement bidding procedures as a means of establishing rates for QF power purchases. This proposed rule would create an artificial market for price setting and would avoid a fixed reliance on utilities' full avoided cost. If successful, such bidding would encourage cogeneration and small power production, energy conservation, efficient use of facilities, and equitable rates.[110] FERC believes that "bidding has the potential for eliminating the seemingly endless debates over what alternative sources of supply are truly avoided by the purchasing utility," because "avoided cost could be derived simply and directly from the prices offered by competing suppliers in the bidding process."[111] Under the proposed rule, states would have the option of setting QF power rates either through a "competitive" bidding system or administratively.

The second rulemaking, FERC Docket No. 88-6, provides guidelines for states choosing the administrative option.[112] Briefly, this NOPR distinguishes between energy and capacity costs, which can be roughly defined as variable and fixed costs respectively,[113] to insure that purchasing utilities are not making capacity payments when their capacity needs have been met. Put another way, FERC does not want a rate structure that encourages unnecessary capital expansion. Docket No. RM 88-6 also provides guidelines on supplemental, maintenance, back-up, and interruptible power to QFs, and guidelines on ownership of interconnection and transmission facilities by QFs.

QFs must satisfy FERC regulations before they are entitled to the benefits. Understandably, the regulations are somewhat restrictive because

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110. *Id.* at 9324.

111. *See* FEDERAL ENERGY GUIDELINES, FERC STATUTES & REGULATIONS ¶ 32,455, at p. 32,025. FERC notes that several states have or are considering a bidding process to supplant administratively determined avoided costs. These states include Maine, Massachusetts, and California (have bidding statutes); Vermont and Michigan (propose to use bidding); Texas (has structured form of negotiation); Connecticut, New Jersey, Idaho, Illinois, Nevada, New Hampshire, New Mexico, Oregon, Utah, New York, Pennsylvania, and Virginia (under consideration). *Id.* at 32,051 n.34.

112. Administrative Determination of Full Avoided Costs, Sales of Power to Qualifying Facilities, and Interconnection Facilities, FERC Dkt. No. 1 RM88-6-000 (Mar. 16, 1988) (amending 18 C.F.R. §§ 292.304-.306) (1987), FEDERAL ENERGY GUIDELINES, FERC STATUTES & REGULATIONS ¶ 32,457, at p. 32,155 [hereinafter Administrative Determination of Full Avoided Costs].

113. "The avoided costs of electric utilities can include both energy and capacity costs. Energy costs are the variable costs associated with the incremental production of electric energy. They represent the cost of fuel, and some operating and maintenance expenses. Under certain circumstances, avoided energy costs can be zero or negative. At such times, electric utilities may be relieved of the obligation to purchase energy from QFs.

Capacity costs are the costs associated with providing the capability to meet the demand for electric energy. Capacity costs may be incurred by a utility in order to build generating facilities, institute conservation and load management programs, or purchase power on the wholesale market. Under FERC's current regulations, capacity payments need to be made when, and only when, the purchase or construction of capacity will be avoided by the purchasing electric utility as a result of its purchase of QF power." *Id.* at 32,157 (footnotes omitted).

public utilities have invested hundreds of billions of dollars pursuant to a scheme of regulation that is over one hundred years old. By so investing, these public utilities have established expectations about their markets. While QFs contribute only one percent of the nation's electricity,[114] that one percent represents a five-fold increase over estimates of QF generated electricity.[115] With this success, FERC hopes to expand this new electricity market even further by promoting new sources of electricity generation beyond PURPA inspired cogeneration and small power production.

In the third NOPR, Docket RM88-4,[116] FERC proposes the creation of a new entity in the electricity market, independent power producers (IPPs). Like QFs, IPPs will compete with traditional public utilities, as well as between themselves, for a share of an emerging market. The fact that traditional public utilities are producing electricity at a higher cost than other producers may indicate that traditional public utilities have reached their technological capacity.[117] Through IPPs, the FERC intends to encourage producers to supply electricity at a cost lower than the electricity supplied by traditional utilities.

According to the NOPR, an IPP is defined as a seller of electricity that:

> (1) [i]s not located in a retail service franchise territory possessed by the seller (or any of its affiliates), and
> (2) [i]s not served by transmission facilities that are essential to the customer and that are controlled by the seller (or any affiliate of the seller).[118]

The premise behind the definition is that if a seller does not have a franchise area and does not own transmission facilities, namely, the seller is not structured like a classic public utility, then the seller will not have market power and can be left largely unregulated.

IPPs will differ from traditional public utilities and QFs precisely because IPPs will feel a lighter touch of the regulatory hand. FERC is gambling that less regulated IPPs will help expand the electricity market;

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114. *See* Lennon & Meyers, *supra* note 107, at 29.

115. In 1980, FERC estimated that there would be 2,636 MW of QF capacity installed. In fact, by 1985 there was nearly fives times that amount (12,120 MW). Administrative Determination of Full Avoided Costs, *supra note* 112, at 32,186 n.42. This figure is low because it represents only the amount of power QFs sold; it does not account for the electricity the QF used nor does it account for self-generation.

116. *See* Regulations Governing Independent Power Producers, FERC Dkt. No. RM-88-4-000 (Mar. 16, 1988), FEDERAL ENERGY GUIDELINES, FERC STATUTES AND REGULATIONS ¶ 32456, at p. 32,101.

117. *Id.* at 32,115, 32,141 n. 101.

118. *Id.* at 32,110. The FERC definition also requires that all sales be made from an independent power facility (IPF), which is defined as a facility or portion of a facility that is not in any utility's rate base and is not otherwise afforded cost-of-service treatment. Thus, the IPP does not get a competitive edge by having all or a portion of its costs protected by traditional regulation.

that competition will increase by promoting new entrants; and, that greater efficiencies will be realized. The NOPR proposes that IPP rates will be set according to a bidding process similar to the bidding process that sets QF power rates. In other words, IPP ratemaking will be market-determined rather than cost-based.[119] This attempt to reform traditional ratemaking makes rate regulation more competitive and attempts to rationalize electricity pricing by treating the new class of suppliers uniformly. "[T]he Commission believes it can promote the most efficient production and allocation of wholesale electric energy and provide the lowest cost reliable energy to consumers by encouraging additional supply options for utilities through streamlined regulation of IPPs."[120]

The economic theory behind IPPs is that IPPs, as new entrants to the power market, must offer electricity below the buyer's incremental cost, or the IPP will fail. If the IPP succeeds, the presence of more suppliers will increase competition.

Who will buy electricity from these new producers? Generally, IPP customers will be franchised utilities that often will be vertically integrated with their own generation, distribution, and most importantly, transmission facilities. A utility will buy electricity in the market when electricity is cheaper to buy than it is to produce. Because the integrated utility will already own transmission facilities, the acquisition cost of the electricity will be low. Further, and more importantly, utility customers also have a stable market and a service obligation to retail customers—utilities need electricity to stay in business.

An IPP can take three forms. First, an IPP can consist of industrial IPPs that generate more power than they consume, and sell the excess. Second, an IPP can be a nonutility, nonindustrial entity with small consumption needs that exists to generate and sell power. Third, a utility IPP sells power outside of its franchise area.[121]

IPPs, then, offer wholesale consumers another supply option. IPPs differ from QFs in that utilities are not obligated to purchase IPP power. Contracts between IPPs and utilities will determine the extent to which utilities will become obligated to purchase IPP power. Utilities then will use contract power to satisfy their service obligation. Of course, for the scheme

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119. Traditional cost-of-service ratemaking may well become a regulatory relic. Such ratemaking works well when the industry is expanding and, therefore, costs are declining. In such a situation, cost-based ratemaking encourages the regulated entity such as a public utility, to invest more in capital expansion. When costs are rising, however, too much investment in plants leads to excess capacity and overinvestment in plant. Overinvestment, in turn, leads to regulators trimming rate increase requests which can lead to underinvestment. *See id.* at 32,106-32,109. *See also,* P. NAVARRO, *supra* note 93 (discussing tendency to underinvest under traditional scheme of public utility regulation); J. TOMAIN, NUCLEAR POWER TRANSFORMATION 79-101 (1987) (discussing tendency to overinvest); Averch & Johnson, *Behavior of the Firm Under Regulatory Constraint,* 52 AM. ECON. REV. 1052 (1962) (same).

120. Regulations Governing Independent Power Producers, RM88-4-000 (March 16, 1988), FEDERAL ENERGY GUIDELINES, FERC STATUTES & REGULATIONS ¶ 32,456, at p. 32,101.

121. *Id.* at 32,112.

to work the purchasing utilities must have the IPP power transmitted into the purchasing utilities' operating systems or power pools. Although the NOPR does not address interconnections between IPPs and existing power pools, these connections must take place.

2. Transmission Access—The Next Frontier

A recent investment bank report on the status of the electric industry concluded that more economical and efficient operation of the nation's electric system will produce an overall savings of $3.43 billion per year or about $52 per "average" consumer per year.[122] The bulk of these savings can result from power pooling, that is, the consolidation among numerous utilities of generation, transmission, and distribution facilities.[123] Accordingly, transmission access is central to gaining these economies of scale. "Existing high-voltage transmission lines between the consolidating service areas will enable this economy to be realized, *provided transmission capacity is available over the specific intertie(s) needed at the time the transmission capacity is needed.*"[124]

Recall that an IPP is defined as not controlling transmission facilities. Consequently, an IPP does not gain and exercise market power. Yet, for the IPP proposal to function at all, transmission is an obvious necessity. Also, if FERC is serious about restructuring the electricity market through competitive bidding, then transmission is the key to FERC's success as well. Therefore, as in the natural gas market, the transmission segment of the electricity industry is becoming the focus of the next generation of federal energy regulations.[125] Unfortunately, neither FERC nor Congress has proceeded to clarify the federal government's authority to compel transmission

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122. SHEARSON LEHMAN HUTTON, ELECTRIC UTILITIES: THE CASE FOR CONSOLIDATION PART 1 10 (March 18, 1988).

123. *See* Pierce, *A Proposal to Deregulate the Market for Bulk Power*, 72 VA. L. REV. 1183, 1191 (1986) (defining power pooling); *id.* at 1191-97 (concluding that present industry structure makes inefficient use of power pooling).

124. SHEARSON LEHMAN HUTTON, *supra* note 122, at 10 (emphasis added). Virtually all commentators agree that transmission is a natural monopoly and that access provides the key to realizing further economies of scale. Professor Richard Pierce, a proponent of widespread deregulation in bulk power sales, also notes the need for access:

> The economies of scale in high voltage transmission are so large that transmission is a natural monopoly. Although transmission accounts for only two percent of the total cost of electricity, access to transmission facilities is critical to the ability of the generation segment of the industry to take advantage of the substantial economies of scale and coordination potentially available in operations.

Pierce, *supra* note 123, at 1188; *see also id.* at 1215-18 (discussing access to transmission lines as means of constraining transmission monopoly).

125. Transmission in the electricity industry, like transmission in the natural gas and telecommunications industries, is a bottleneck and exhibits market power. *See* Pierce, *supra* note 123, at 1212-30 (discussing how limited number of transmission facilities allows owners of transmission facilities to exercise market power).

access through interconnections, power pooling, and wheeling.[126] Instead, access to the electricity transmission grid is a hodge-podge of federal common law rulings and interpretations greatly restricting FERC's power to order access.

Under the Federal Power Act and the Public Utilitites Regulatory Policies Act, FERC has exercised limited power to order interconnections and wheeling.[127] Because the nation's approximately 250 investor-owned utilities own most of the transmission lines,[128] FERC historically has been reluctant to order one private company to open its access to other private companies. FERC has preferred, instead, to have the companies negotiate arrangements among themselves. Although the Supreme Court has ruled that a federal district court can order a utility not to block transmission access for anticompetitive purposes, the Court noted that the Federal Power Act did not authorize the agency to compel access.[129]

The explicit language of pertinent federal legislation seems to give FERC a good deal of authority over tranmission access. The application of that legislation, however, and FERC's own interpretations generally have limited FERC's jurisdiction. The Federal Power Act authorizes FERC to order interconnection upon the application of state utility commissions or persons engaged in transmission or sale of electric energy, if the interconnection is in the public interest and will not burden the public utility.[130] PURPA further authorizes FERC to order the physical connection of transmission facilities and any necessary increases in transmission capacity when FERC finds that the interconnection is in the public interest, optimizes the efficient use of facilities or resources, or improves the reliability of the electric

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126. "Interconnection" occurs when a generating facility physically connects with another entity's transmission lines. "Power pooling" occurs when a group of generating facilities agree to share capacity and transmission facilities. "Wheeling" occurs when one generator uses the transmission facilities of another entity to sell its power to a third party customer.

One of the points that Commissioner Charles Trabandt makes in his separate opinion (concurring and dissenting) on the three NOPRs is that "the transmission access question continues to be a major source of confusion and controversy. . ." and that the "Commission [should] only address reform of transmission regulation on a generic, industrywide basis and not piecemeal in the context" of the NOPRs. Opinion of Commissioner Charles A. Trabandt, Concurring in Part and Dissenting in Part, FERC Dkt. Nos. RM88-4-000; RM88-5-000; and RM88-6-000 (Mar. 16, 1988), FEDERAL ENERGY GUIDELINES, FERC STATUTES & REGULATIONS ¶ 32,455, at p. 32,086.

127. *See* Pierce, *supra* note 123, at 1188 ("The FERC . . . does not have the power to order the owner of a transmission facility to transmit electricity across its lines for other parties, a procedure known as 'wheeling' " (citing City of Paris v. Kentucky Util. Co., 41 F.P.C. 45 (1969)). Pierce also writes that under PURPA "Congress granted the FERC the power to order wheeling in certain circumstances." Pierce, *supra* note 123 (citing 16 U.S.C. § 824j(b) (1982)). The conditions under which the FERC may exercise this power, however, are so severely limited that they may never exist. *See* Southeastern Power Admin. v. Kentucky Util. Co., 25 F.E.R.C. ¶ 61,204 (1983); *id.* at n.38.

128. *See* C. PHILLIPS, *supra* note 100; L. HYMAN, *supra* note 91.

129. Otter Tail Power Co. v. United States, 410 U.S. 366 (1973).

130. 16 U.S.C. § 824a(b) (1982).

system.[131] PURPA also authorizes FERC to order wheeling (the ordering of a utility to provide transmission services to another utility) under similar circumstances,[132] as long as FERC first determines the relative economic benefits and burdens of the parties.[133] Under both acts, power pooling, the grouping together of several utilities and distributors to share transmisson and capacity, is voluntary.

According to a recent government study,[134] FERC has not been aggressive in the use of its transmission access power. Of sixty-two cases requesting transmission services, FERC granted access fifteen times, denied access nineteen times, compromised ten cases, and approved settlement eighteen times.[135] The simple point is that although FERC seems to have the power to order access and the physical facilities are available,[136] transmission line owners exercise significant market power in the use and ownership of their lines. Clearly, if a market-like regulation is going to exist in the electricity industry, the transmission access problem must be resolved with thorough open access regulations or some sort of competitive bidding system in the transmission segment, as well as in the generation segment.[137]

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131. 16 U.S.C. § 824a-3 (1982 & Supp. 1988) (PURPA § 210).

132. 16 U.S.C. § 824j (1982 & Supp. 1988) (PURPA § 211).

133. 16 U.S.C. § 824k (1982) (PURPA § 212).

134. U.S. GENERAL ACCT. OFF., ELECTRIC POWER TRANSMISSION: FEDERAL ROLE IN SYSTEM USE AND REGULATION, GAO/RCED-88-98 (April 1988).

135. *Id.* at 4. A slightly refined analysis of the data indicates that wheeling services, the most frequently requested service, was granted in thirteen percent of the cases, denied in thirty-three percent, and compromised fifty-four percent. In cases involving interconnections, seventy percent granted the request, ten percent denied the request, and twenty percent settled. Most often FERC based its decision to grant or deny requests on section 205 or section 206 of the FPA, the ratemaking sections, rather than on the previously cited grants of authority.

The study also demonstrated that actual or constructive denial of access, anticompetitive practices, and discriminatory practices or pricing were the most frequently litigated issues in transmission access cases. "Constructive denial means that, while a transmission line owner does not directly refuse access, the terms for access presented by the owner make access impractical." *Id.* at 27.

136. *See* SHEARSON LEHMAN HUTTON, *supra* note 122, at 6 ("What is important is that adequate transmission capacity exists to enable power pooling economies to be achieved in most of the country . . .").

137. *See* O'Connor & Keenan, *The Politics and Policy of Access to the Electric Utility Transmission System,* PUB. UTIL. FORT., July 7, 1988, at 11. O'Connor and Keenan present an interesting analysis of the transmission access problem and conclude that there may be an "historical inevitability" about the resolution of the issue.

O'Connor and Keenan note the similarities between access in the natural gas, telecommunications, and electric industries and also point out three stages in the development of the problem. First, a transportation problem is precipitated at the commodity end of the fuel cycle, *i.e.,* a surplus of product or potential product exists waiting to get to market. Second, vertically integrated incumbents resist open access arguing variously that reliability will suffer and/or private property (the incumbent's transmission facilities) cannot be violated without disturbing patterns of use and established expectations. Finally, the arguments are disposed of and then the issue becomes how to resolve the access question. The authors prefer a market-price based system as opposed to mandatory/pro rata carriage orders.

The closer the system moves toward first come, first served as a basic principle,

C. *Federal Regulations and Allocative Efficiency*

Federal natural gas and electricity initiatives clearly are motivated by one overriding goal—to move energy regulations closer to the market. This movement is premised on the reality that natural gas and electricity (and oil and coal) are relatively abundant. Also, old electricity technologies seem to have peaked, while new technologies in production and distribution appear available. When combined, adequate supplies and potential technological gains mean greater efficiencies and more competition. In addition, the prevailing tenet of American democratic capitalism asserts that markets are better suited than governments to order supplies, demands, and prices in a competitive environment. Therefore, as a matter of allocative efficiency, FERC's regulatory gamble is to move price and allocation controls for natural gas and electricity from the hearing rooms of FERC to the constrained markets proposed by these rulemakings.

FERC natural gas and electricity rulemakings are revolutionary in two ways. First, the rulemakings rest on FERC's existing authority, not on some new legislative mandate. Second, the rulemakings break away from traditional utility-type regulation. These proposals, still, are consistent with the dominant model of energy regulation because the model aspires to mimic the market and resorts to regulation only when a market imperfection justifies government intervention. The one cautionary note is that the regulatory transition may not be completely smooth. Although natural gas pipelines and electricity distribution systems (public utilities) may complain if they, in fact, lose market power, this complaint will fall on deaf ears. A reduction in market power will improve allocative efficiency as goods move to their highest valued uses without an accompanying loss of social welfare. Yet, captive consumers of natural gas and electricity may bear an unreasonable amount of the transition costs and a general move to the market will not, on its own, protect those consumers. Instead, these consumers look to state regulators for protection.

IV. State Regulation and Energy Planning

State public utility commissions (PUCs) have been buffeted by the energy crisis as much as federal regulators. Instead of being pressured by

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> particularly as a result of pressure from new commodity providers and customers seeking more competitively priced supplies, the greater the difficulty for the incumbent to use control of transmission facilities to frustrate commodity competition. In addition, there will be a diminished ability to recover, through value-based pricing of transmission, on the capital invested in the stranded generating assets.
> * * *
> [I]n the competition by new players for loads traditionally served by an incumbent, the incumbent and the regulator should rely on flexible, aggressive pricing for the load retention, rather than on arguments relating to the maintenance of rates of return or the existing network of cross-subsidies.

Id. at 16-17; *see also* Pierce, *supra* note 123, at 1232-34 (discussing competitive transmission rates).

producers and other major industry actors, state utility commissions have felt the pressure of consumers squeezed by price increases. State PUCs and state legislatures responded to energy price increases by tightening the conditions under which regulated utilities operate.[138] Rate hearings became more contentious as PUCs more closely scrutinized the construction and cancellation of nuclear plants, excess capacity, and the purchase of increasingly expensive fuel. Throughout the 1970s and 1980s there was a feeling that PUCs were in a reactive posture, waiting for the smoke from the energy crisis to clear before engaging in wholesale regulatory reform. The smoke has cleared substantially and PUCs are beginning to assess their regulatory futures.

The clear signal from energy markets seems to be that we are not running out of natural resources, that federal regulations have contributed significantly to market distortions, that market-based utility regulation is promising, and that federal regulators are committed to across the board deregulation of natural gas and electricity. A simultaneous but contrary signal from Washington is that the federal government is trying to centralize energy decisionmaking.[139] These two signals share an allegiance to market ordering and a belief in competitive pricing. These signals are largely silent on the externalities associated with a transition to a greater reliance on the market. In a real sense, current state regulations can be interpreted as not addressing allocative efficiency, that is how to make the economic pie bigger. Rather, the signals can be interpreted as addressing distributional equity—how to protect persons not well situated to help themselves.

A. Natural Gas

Historically, state commissions regulated the natural gas industry. In 1938, the federal government intervened to regulate interstate transportation with the passage of the Natural Gas Act. In producing states,[140] the regulations were aimed at avoiding the Tragedy of the Commons[141] that results from the rule of capture.[142] The rule of capture encourages owners of oil and natural gas reserves to produce as much of those resources as they can

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138. *See supra* note 93 and accompanying text (discussing regulations and legislation that public utility commissions and state legislatures enacted to shield consumers from paying for capital investment that yielded no electricity).

139. In addition to FERC's attempted centralization, the U.S. Supreme Court is also advancing the federalization of energy decisionmaking. *See infra* part IV.

140. The major natural gas producing areas are the Louisiana Gulf Coast, the Texas Gulf Coast, the Anadarko/Amarillo fields in Texas, the East Texas field, the Appalachian region, California, the Prudhoe Bay field in Alaska, and the San Juan Basin. M.E. SANDERS, *supra* note 26, at 29; A. TUSSING & C. BARLOW, *supra* note 26, at 39.

141. *See* Hardin, *The Tragedy of the Commons,* 162 SCIENCE 1243 (1968).

142. The Rule of Capture "holds that property in oil and gas is in the person who produces them." H. WILLIAMS, R. MAXWELL & C. MEYERS, CASES AND MATERIALS ON THE LAW OF OIL AND GAS 13 n.1 (4th ed. 1979); *see also* Elliff v. Texon Drilling Co., 146 Tex. 575, 210 S.W.2d 558 (1948).

before their neighbors. This incentive wastes the resource and results in the Tragedy of the Commons.[143] One way around the downside of the rule of capture is the doctrine of correlative rights. Under the doctrine of correlative rights "each owner of oil and gas in a reservoir can produce its fair share of the total oil and gas in the reservoir, measured with reference to its proportionate ownership of the reservoir."[144] Therefore, to avoid the waste which the rule of capture creates and to protect correlative rights, states regulate the amount of oil and natural gas that can be produced to avoid waste and to promote efficient conservation.[145]

In an important article, Professor Richard Pierce discusses the major types of state producer regulations—unitization and direct regulation—and analyzes and criticizes in detail four current examples of direct natural gas regulations.[146] Pierce's analysis of "ratable take," "share-the-contract," "priority of purchase," and "allowable production" shows that these regulations adversely affect free market exchanges in natural gas by favoring producing states at the expense of consumers. Through direct regulation, producing states have exercised market power for decades. Producing states have driven oil and natural gas prices above marginal cost, thereby raising prices and curtailing output at the expense of consumers and consuming states.[147] Pierce concludes that unitization is "vastly superior"[148] to direct regulation for both conservation and correlative rights purposes.

Ratable take regulations require a purchaser of natural gas to treat equally all owners of a field. In *Transcontinental Gas Pipe Line Corp. v. State Oil & Gas Board,*[149] the Mississippi Oil & Gas Board, the state's PUC, applied the rule in a way that forced a pipeline to purchase gas from producers with whom it had no contract. Although the United States Supreme Court invalidated that application of the rule, the case shows what odd consequences the ratable take rule can have. With enforceable rules, the state, in effect, guarantees natural gas producers an out-of-state market

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143. The wastes produced are: excess capital expended on drilling; too many wells dissipate gas pressure and reduce total recovery; too little gas pressure increases lift costs; advantages of natural storage are lessened or lost; and gas produced today at a low cost may loose the opportunity costs of gas that could be produced tomorrow. *See* Friedman, *The Economics of the Common Pool: Property Rights in Exhaustible Resources,* 18 UCLA L. REV 855 (1971); Pierce, *State Regulation of Natural Gas in a Federally Deregulated Market: The Tragedy of the Commons Revisited,* 73 CORNELL L. REV. 15, 21-23 (1987); Williams, *Running Out: The Problem of Exhaustible Resources,* 7 J. LEGAL STUD. 165 (1978).

144. Pierce, *supra* note 143, at 22-23.

145. *See* N. ELY, THE OIL AND GAS CONSERVATION STATUTES (ANNOTATED) (1933). The statutes involved well spacing, number of wells, antiflaring legislation, and allowables. *See also* Pierce, *supra* note 47, at 23-30.

146. Pierce, *supra* note 143; *see also Natural Gas Regulation in the Western U.S.: Perspectives on Regulation in the Next Decade,* 27 NAT. RESOURCES J. 771 (1987); *Workshop on Natural Gas Prorationing and Ratable Take Regulation,* 57 U. COLO. L. REV. 149 (1986).

147. Pierce, *supra* note 143, at 28.

148. *Id.* at 27.

149. 474 U.S. 409 (1986). *See infra* notes 178-82 and accompanying text (discussing Supreme Court's decision in *Transcontinental Gas Pipe Line Corp.*).

at above market prices. This guarantee increases production activities and puts excess gas on the market.[150] Pierce is highly critical of ratable take rules because the rules "so completely undercut the NGPA's goal of deregulating natural gas that no court could permit the orders to stand."[151]

Share-the-contract regulations[152] require the operator of a well to provide a drilling unit owner with the option to have the operator market each owner's share on terms at least as favorable as the operator's terms.[153] In effect, the regulations compel the operator to serve as the marketing agent for the drilling unit. Unlike ratable take provisions, the share-the-contract rule strives to equalize contract receipts among interest holders. The rule trys to protect owners' correlative rights and does not increase the purchasing obligation of pipelines.

Priority-of-purchase regulations[154] require pipelines to purchase all gas accessible to them in accordance with state-prescribed priorities. For example, a PUC may require a pipeline to buy associated gas (gas produced while oil is also being produced) from a nearby oil producer.[155] This regulation increases a pipeline's purchase obligation at prices above those that would be set in an unregulated market. The increased purchase obligation induces oversupply and increases the wealth of the producing states.[156]

The final direct regulation that Pierce discusses is allowable production. Allowable production sets the level of production "allowed" from any well or lease form.[157] Allowable regulations seek to achieve conservation. While such regulations can encourage conservation, inevitably the regulations affect correlative rights if different interest holders have different contracts with a pipeline or no contracts at all with a pipeline. Also, allowable regulations affect the supply of and demand for gas and, therefore, affect gas prices.[158]

These direct regulations, according to Pierce, contravene free market principles and congressional initiatives by favoring producers and producing states at the expense of consumers and consuming states. Direct regulations frustrate the working of the market and, therefore, retard efficiency through producer protection leading to higher than market prices. However, consuming states are not powerless against high prices and their most effective weapon is ratemaking. Currently, PUCs use the ratemaking process to counteract high gas costs and prevent extraordinary costs from being imposed on consumers.

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150. Pierce, *supra* note 143, at 35-36.

151. *Id.* at 37.

152. *See* Seal v. The Corporation Comm'n of Oklahoma, 725 P.2d 278 (Okla. 1986) (holding share-the-contract statute constitutional).

153. Pierce, *supra* note 143, at 38.

154. *See* ANR Pipeline Co. v. Corporation Comm'n of Oklahoma, 643 F. Supp. 419 (W.D. Okla. 1986) (holding priority-of-purchase regulation unconstitutional).

155. Pierce, *supra* note 143, at 40.

156. *Id.* at 42.

157. *Id.* at 45.

158. *Id.* at 48.

A recent opinion of the United States Court of Appeals for the Third Circuit, *Kentucky West Virginia Gas Co. v. Pennsylvania Public Utility Commission,*[159] exemplifies the consuming states' response to distortions in the natural gas market which have caused lower priced natural gas to be available but not delivered to consumers. In 1984, Pennsylvania passed a statute that required utilities of a certain size to pursue least cost gas purchasing policies.[160] Equitable Gas Co. (Equitable) is a Pennsylvania corporation involved in production, transportation, distribution, and sale of natural gas. When Equitable filed for a rate increase in 1985, the Pennsylvania Public Utility Commission scrutinized its rate filing and determined that in buying natural gas from its wholly owned subsidiary, Kentucky West Virginia Gas Co., Equitable failed to purchase cheaper available gas. The PUC denied the full rate increase ruling that the rate would not be reasonable and prudent. On appeal, the Third Circuit upheld the PUC order over several constitutional challenges, including federal preemption. Equitable argued that the state court should declare the statute invalid because the statute violated the filed rate doctrine[161] and the NGPA's free market preference. The court rejected these constitutional arguments, reasoning:

> Regarding the states' traditional power to consider the prudence of a retailer's purchasing decision in setting retail rates, we find no reason why utilities must be permitted to recover costs that are imprudently incurred; those should be borne by the stockholders, not the ratepayers. Although *Nantahala* underscores that a state cannot independently pass upon the reasonableness of a wholesale rate on file with FERC, it in no way undermines the long-standing notion that a state commission may legitimately inquire into whether the retailer prudently chose to pay the FERC-approved wholesale rate of one source, as opposed to the lower rate of another source.[162]

While the *Kentucky West Virginia* opinion is consistent with other state PUC treatments regarding the purchase of overpriced natural gas,[163] the Supreme Court's recent decision in *Mississippi Power & Light Co. v. Mississippi Public Service Commission,*[164] which regarded FERC's preemp-

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159. 837 F.2d 600 (3d Cir. 1988).

160. 66 PA. CONS. STAT. ANN §§ 1307(f), 1317-18 (Purdon 1987).

161. *See* Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953 (1986) (enunciating filled rate doctrine); *infra* notes 189-91 and accompanying text (discussing Supreme Court's decision in *Nantahala Power & Light Co.).*

162. Kentucky West Virginia Gas Co. v. Pennsylvania Pub. Util. Comm'n, 837 F.2d 600, 609 (3d Cir. 1988).

163. *See, e.g.,* New Regulatory Framework for Gas Utilities, 79 Pub. Util. Rep. 4th (PUR) 1 (1986); Rate Design for Unbundled Gas Utility Service, 79 Pub. Util. Rep. 4th (PUR) 93 (1986).

164. 108 S. Ct. 2428 (1988).

tion of prudency determinations, raises questions about the long-term staying power of this strategy.[165]

States have little power in the wholesale arena because of widespread federal involvement. Yet, states can exercise retail ratemaking authority and, as a result, indirectly regulate the activities of natural gas companies through close monitoring of purchasing practices and close examination of a utility's rate design, marketing, and financing in rate hearings.

B. Electricity

The most significant development in the state regulation of the electricity industry is the response to increasing electricity costs, excess capacity, and leveling growth in demand. These economic circumstances are a mixed blessing. On the positive side, an active, competitive electricity market is indicated by the fact that there is more elasticity in the electricity market than once believed, that excess capacity exerts downward pressure on prices, and that there are new producers of electricity trying to put their product on the market. This is the good news, because with increased competition efficiencies should be realized, that is, prices should fall and consumers should benefit. These market circumstances, unfortunately, have a dark side. Excess capacity indicates an overinvestment of capital and ratepayers and shareholders, in some proportion, must pick up the costs of poor investment.

The change in market conditions has resulted in two regulatory responses. As discussed earlier, the movement at the federal level is toward deregulation. The response at the state level has been no less dramatic, but in the opposite direction. The state regulatory call is for a new form of utility regulation generically called least-cost utility planning (LCUP).[166] Simply defined, LCUP is intended to encourage electric utilities to provide energy services at the least possible cost.[167] LCUP seeks to eliminate overexpenditure of capital funds and is seen as an antidote to traditional cost-based ratemaking that encouraged such overexpenditure.[168]

Briefly, LCUP requires either the utility or the state to undertake energy studies which integrate supply and demand as well as cost and risk, to

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165. Mississippi Power & Light Co. v. Mississippi Pub. Serv. Comm'n, 108 S. Ct. 2428 (1988); *see also infra* notes 192-98 and accompanying text.

166. *See generally* Berry, *Least-cost Planning and Utility Regulation,* PUB. UTIL. FORT., Mar. 17, 1988, at 9; Burkhart, *Least-cost Planning: A State Survey,* PUB. UTIL. FORT., May 14, 1987, at 38; Hayes & Scheer, *Least-cost Planning: A National Perspective,* PUB. UTIL. FORT., Mar. 19 1987, at 13; Ruff, *Least-cost Planning and Demand-side Management: Six Common Fallacies and One Simple Truth,* PUB. UTIL. FORT., April 28, 1988, at 19; Steigelmann, *Demand-side Management and Least Cost in a Dynamic Setting,* PUB. UTIL. FORT., July 7, 1988, at 41; Wellinghof, *The Forgotten Factor in Least-cost Utility Planning: Cost Recovery,* PUB. UTIL. FORT., Mar. 31, 1988, at 9; Wellinghoff & Mitchell, *A Model for Statewide Integrated Utility Resource Planning,* PUB. UTIL FORT., Aug. 8, 1985, at 19.

167. Wellinghof, *supra* note 166, at 10.

168. *See* Averch & Johnson, *supra* note 119.

attain a least-cost plan. These studies are used to decide such issues as construction, generation, transmission, siting, fuel use, efficiency standards, conservation, load management, and ratemaking. In the age of computers it would seem that energy planning is doable. However, our recent economic history, particularly as it pertains to energy, indicates that energy markets are becoming more complicated and that utilities cannot continue to rely on steady growth and a guaranteed service area. Indeed, energy planners cite several causes of increased planning complexity that make LCUP a difficult business: increased economic and market uncertainty;[169] more energy supply options;[170] multiple and frequently conflicting economic and social policy objectives;[171] and increasingly complicated load forecasting.[172]

C. *Distributional Equity and State Regulations*

State natural gas and electricity regulations are decidedly more concerned with distributional (or political) goals than with efficiency. The natural gas regulations explicitly protect natural gas producers and the electricity regulations intentionally protect consumers. In both cases, the imposition of energy regulations may well raise the cost of doing business and, therefore, may not be efficient.[173] The gas rules increase the market price of gas and the electricity rules increase the transaction costs in the electricity business. Nevertheless, the regulations fit the policy model because they attempt to accommodate viable political voices in a dynamic federal system.

V. The Supreme Court and Energy Federalism

Federal and state regulations regard the means and ends of energy policy differently. Federal regulations favor deregulation centralized in Washington, D.C. to achieve market-ordering and allocative efficiency, while state regulations favor planning decentralized in the several states to achieve consumer protection and distributional equity. The conflict between the federal and state governments over the means and ends of energy policy can be seen as a classic example of a federalism power struggle. And so it

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169. Uncertainty is caused by increased volatility of fuel prices, construction costs, lead times, interfuel competition, competition among suppliers, and regulatory uncertainty. *See* Hayes and Scheer, *supra* note 166, at 16.

170. New energy suppliers increase the competitiveness of the market and come in the form of conventional and new generating technologies, load-management and demand-side alternatives, greater purchasing opportunities, cogeneration, small power production, diversification, growing flexibility in pricing, and growing opportunities for risk sharing. *Id.*

171. In the more competitive environment, corporate objectives are increasing. A utility, for example, can diversify by investing in other energy projects, or in nonenergy markets, or it can decide to minimize capital expenditures or invest in conservation and many of these decisions will depend on the regulatory climate.

172. *See, e.g.*, Bjorklund, *Planning for Uncertainty at an Electric Utility*, Pub. Util. Fort., Oct. 15, 1987, at 15.

173. I use the term "efficiency" loosely here to mean an aggregate increase in wealth. I also simply take for granted that a reduction in transaction costs is an efficient move.

is. These federal-state differences can also be seen as complementary in that they are held together in rough tension by the dynamic model of energy policy described in part II. Intergovernmental conflict (federalism), no less than intragovernmental conflict (separation of powers),[174] is a conscious part of a modulating energy policymaking and decisionmaking system. Moreover, the system has a built-in dispute resolution mechanism. The United States Supreme Court is frequently the final arbiter of federalism conflicts.

In recent years, through a series of natural gas and electricity decisions, the Court has provoked discussion of an intriguing question about the direction of national energy policy: Does federal deregulation of energy markets preempt states from regulating those markets? This question is both intellectually and politically challenging.

Intellectually, particularly from an historical standpoint, there seems to be no great impediment to Congress' preempting state regulation in favor of a free market. After all, the main purpose of the Commerce Clause is to promote national markets and avoid the state balkanization of trade. Yet logically, it seems odd to say that Congress can "legislate" a free market by its inaction. Certainly, a market established by congressional declaration is not free.

Politically, though, things are a little simpler. First, the federal government resists all-encompassing solutions to complex energy issues. Historically, the country has never had and is unlikley to have a comprehensive national energy plan. The lack of a comprehensive national energy plan obviates the need for grand pronouncements about Congress mandating a "free market" in energy. Second, as a matter of political logic, because states are sovereigns, Congress does not have the power to tell states to stop legislating or to stop regulating energy markets when it refuses to regulate.[175] States will continue to act and, occasionally, those state actions will be challenged in court and, again occasionally, those challenges will end up in the United States Supreme Court.

The question posed earlier about the scope of congressional power and authority to "legislate" a free market in energy remains provocative in light of recent federal deregulatory efforts. The question also permeates the Court's recent preemption rulings affecting both the natural gas and electricity industries. These decisions indicate a shift in favor of the centrali-

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174. Fundamental examples of intragovernmental conflict include: judiciary v. agency; judiciary v. legislature; executive v. legislature; and any other combination. For a discussion of such conflicts in an energy context, see *Aman, supra* note 6; Byse, *supra* note 6; Tomain, *supra* note 6.

Perhaps the best exposition of the dynamic role of conflict in our polity is James Madison's discussion of separation of powers. Madison writes that by separating and allocating power among various branches, ambition can be used to counteract ambition, thus enabling the government to function. *See* THE FEDERALIST No. 51 (J. Madison).

175. *See* Pierce, *supra* note 143, at 15. Pierce disagrees with this. He writes: "When Congress determines that a market should operate free from the distortive effects of federal price regulation, that statutory determination should also foreclose the potentially distortive effects of many forms of state regulation." *Id.*

zation of energy decisionmaking in the federal government and greater reliance on the market and market-based controls, while reducing the ambit of regulatory authority left in the states.

A. The Court's Natural Gas Docket

On the natural gas side of its docket, the Court recently ruled in *Schneidewind v. ANR Pipeline Co.*[176] that the existing scheme of federal regulation under the Natural Gas Act preempted a Michigan statute requiring natural gas pipelines to obtain state approval before issuing securities. The Court reasoned that the Michigan statute regulated the rates and facilities of natural gas companies transporting natural gas in interstate commerce and thus constituted an interference with a field occupied by the NGA. The state argued that the statute was aimed at preventing an overcapitalization of gas transporters to protect ratepayers and investors, and to assure supply. The state claimed that this protection was a traditional state public utility commission function. The Court rejected the state's protectionist arguments in holding that the statute was preempted.

Schneidewind is consistent with two other recent Court opinions upholding FERC deregulation of the natural gas market. This Term, in *Federal Energy Regulatory Commission v. Martin Exploration & Management Co.*,[177] the Court was asked to interpret the NGPA's price setting provisions. The NGPA categorized "new tight formation gas," a certain category of natural gas, as either regulated or deregulated. Oddly, because of market conditions, the regulated category was priced higher than the deregulated category and producers sought to take advantage of the higher regulated rate. FERC ruled that the deregulated rate applied, but the United States Court of Appeals for the Tenth Circuit reversed the ruling.[178] The Supreme Court reversed the Tenth Circuit and adopted the FERC interpretation in a pro-deregulation opinion. After discussing the legislative history of natural gas regulation, the Supreme Court said: "Not one participant in the legislative process suggested that producers should receive higher prices than deregulation would afford them. The operating assumption of Congress was that deregulation was the most favorable regime for gas producers under consideration."[179]

A third recent natural gas opinion is *Transcontinental Gas Pipe Line Corp. v. Mississippi State Oil & Gas Board*[180] (Transco). In *Transco,* the Supreme Court held that federal regulation preempted Mississippi's "ratable take" rule. Ratable take rules are intended to protect the correlative rights

176. 108 S. Ct. 1145 (1988).

177. 108 S. Ct. 1765 (1988).

178. Martin Exploration & Mgmt. Co. v. Federal Energy Regulatory Comm'n, 813 F.2d 1059 (10th Cir. 1987), *rev'd,* 108 S. Ct. 1765 (1988).

179. Federal Energy Regulatory Comm'n v. Martin Exploration & Mgmt. Co., 108 S. Ct. 1765, 1769 (1988).

180. 474 U.S. 409 (1986).

of the interest holders of a common pool. Previously, the rule was used to prevent one purchaser from buying from one buyer who might then drain a common pool.[181] Before this litigation, the ratable take rule had never been used to require a pipeline to buy from noncontract sellers.

In 1978, Transco, an interstate pipeline company, entered into thirty-five contracts with gas producers holding interests in a common field. Those contracts contained take-or-pay clauses favorable to the producers.[182] Because of a gas shortage, Transco purchased all the contract gas the contracts required and also purchased gas from producers who held interests in the common field but with whom Transco had no contracts. When demand declined in 1982, the thirty-five contracts obligated Transco to take-or-pay for the gas. However, Transco had no similar obligation to take-or-pay for noncontract gas. The Mississippi Oil and Gas Board, under the authority of the state's ratable take rule, ordered Transco to buy proportionate amounts of gas from noncontract producers. In addition, the Board said that Transco must purchase the noncontract gas according to nondiscriminatory take-or-pay provisions. In other words, the Mississippi Oil and Gas Board used the ratable take rule to force Transco to buy gas that it did not need from producers with whom it had no contract. The obvious effect of such a ruling was to protect in-state producers and raise prices to mostly out-of-state consumers.

Although the Mississippi Supreme Court found no federal preemption because the NGPA completely deregulated the type of gas in question, the United States Supreme Court stood that reasoning on its head. The Court ruled that high priced gas deregulation under NGPA had little to do with state regulation affecting a pipeline's costs and purchasing patterns. The Court ruled: "Mississippi's action directly undermines Congress' determination that the supply, the demand, and the price of high-cost gas be determined by market forces."[183]

In preempting the Mississippi Oil and Gas Board's order, the Court directly confronted the earlier posed question concerning the preemptive effects of deregulation. The Court analyzed the preemption issue by ascertaining whether Congress, in revising natural gas regulations to give market forces a more significant role in determining supply, demand, and price, intended to give the states the power it denied FERC. The Court concluded that: "In light of Congress' intent to move toward a less-regulated national natural gas market, its decision to remove jurisdiciton from FERC cannot be interpreted as an invitation to the States to impose additional regula-

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181. A "ratable take" provision requires gas purchasers to buy gas according to the proportion of ownership of a natural gas pool even though the purchaser has a contract or contracts with less than all the members of the pool. *See supra* notes 149-51 and accompanying text (discussing ratable take regulations).

182. *See supra* note 55 and accompanying text.

183. Transcontinental Pipe Line Corp. v. State Oil and Gas Bd. of Mississippi, 474 U.S. 409, 422 (1986).

tions."[184] Concerned that the ratable take rule disturbed NGPA's attempted unification of the natural gas markets, the Court invalidated the state order, saying that the invalidation would inure to the benefit of consumers.

Thus, in *Schneidewind* and *Transco* the Court preempted state regulations, while in *Martin Exploration* it upheld FERC. In these three cases, the Court sent two loud signals. First, the federal government was to control energy regulation. Second, market-oriented deregulation efforts could be used to preempt state regulations that interferred with the free functioning of energy markets. Consistent with these natural gas decisions, the Court's recent electricity opinions further the growing federal centralization of energy regulation.

B. The Court's Electricity Docket

In *Arkansas Electric Co-operative v. Arkansas Public Service Commission,*[185] the Court suggested, in dicta, that deregulation of energy markets could constitute preemption of state regulation. *Arkansas Electric* concerned the state's assertion of jurisdiction over the wholesale rates that the Arkansas Electric Co-operative, a rural electric co-operative, charged its customers, who were seventeen smaller rural co-ops. Normally, the federal government established wholesale rates. Although Arkansas Electric was plugged into an interstate grid, a normally sufficient condition for the assertion of federal wholesale jurisdiction, FERC ruled that it had no jurisdiction over the wholesale rates of rural co-operatives, thus leaving a regulatory gap.

This gap provoked Justice Brennan, writing for the Court, to ruminate that congressional deregulation may lead to preemption: "[A] federal decision to forego regulation in a given area may imply an authoritative federal determination that the area is best left *un*regulated, and in that event would have as much preemptive force as a decision *to* regulate."[186] Brennan held otherwise: "In this case, however, nothing in the language, history, or policy of the Federal Power Act suggests such a conclusion."[187] Consequently, states were allowed to regulate the wholesale rates of electric co-operatives because neither the Federal Power Act nor the Rural Electrification Act[188] indicated that Congress intended to preclude the states from so regulating.

Although *Arkansas Electric* upheld state jurisdiction, the Court's discussion of deregulation and pre-emption were ominous signs for state energy regulators. Since *Arkansas Electric* the Supreme Court has issued two important opinions that severely constrict the scope of state jurisdiction in electric utility rate regulation. These decisions indicate a recentralization of electricity decisionmaking in FERC.

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184. *id.* at 423.

185. 461 U.S. 375 (1983).

186. Arkansas Elec. Co-op. v. Arkansas Pub. Serv. Comm'n, 461 U.S. 375, 384 (1983).

187. *Id.* The Court also held that nothing in the Rural Electrification Act preempted state authority. *Id.* at 385.

188. 7 U.S.C. §§ 901 *et seq.* (1982).

In *Nantahala Power & Light Co. v. Thornburg,*[189] the Supreme Court overturned the North Carolina PUC's allocation of electric power as preempted by the FPA. In *Nantahala,* Nantahala Power & Light (Nantahala) and Tapoco, Inc, were wholly owned subsidiaries of the Aluminum Company of America (Alcoa), and each owned hydroelectric power plants on the Little Tennessee River. Nantahala served customers at wholesale rates regulated by FERC and at retail rates regulated by the North Carolina Utilities Commission (NCUC). Tapoco's sole function was to manage the power that went to Alcoa. Nantahala and Tapoco sold most of the electricity generated by these plants to the Tennessee Valley Authority (TVA), a federal marketing authority. The TVA, in turn, supplied Nantahala and Tapoco with a fixed amount of low-cost "entitlement" power pursuant to contracts filed with FERC.

Nantahala applied to the NCUC for a rate increase for its intrastate retail rates. The NCUC issued an order that apportioned the TVA entitlement power to Nantahala and Tapoco differently than the contract filed with FERC. The NCUC allocated North Carolina retail customers a greater share of the entitlement power. Consequently, this allocation lowered the price of power for North Carolina retail customers and raised the price of power for Tapoco's sales to Alcoa. The North Carolina Supreme Court held that such a reallocation was not preempted because retail rate regulation was a traditional prerogative of state PUCs.[190] On appeal, the United States Supreme Court held that "[o]nce FERC sets such a rate, a State may not conclude in setting retail rates that the FERC-approved wholesale rates are unreasonable. A state must rather give effect to Congress's desire to give FERC plenary authority over interstate wholesale rates, and to ensure that the States do not interfere with this authority."[191]

The *Nantahala* decision strengthened the filed rate doctrine, that is the doctrine which holds that a FERC filed and accepted contract governs the relationship between the parties to the contract. With the *Nantahala* decision, the Court set up this past Term's most significant energy law case, which may well lead to a significant restructuring of the electric industry. *Mississippi Power & Light v. Mississippi Public Service Commission*[192] went to

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189. 476 U.S. 953 (1986).

190. The North Carolina court was not far off in its analysis. As recently as 1983, the United States Supreme Court issued a similar ruling. In Pacific Gas & Electric Co v. State Energy Resources Conservation & Development Commission, 461 U.S. 190 (1983), the constitutionality of a California statute which required a nuclear power plant operator to obtain a state license before operation was at issue. In the face of a preemption challenge, the Court upheld the state statute. Justice White wrote:

> [S]tates retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost, and other related state concerns.
>
> Need for new power facilities, their economic feasibility, and rates and service, are areas that have been characteristically governed by the States.

Id. at 205.

191. Nantahala Power & Light Co. v. Thornburg, 476 U.S. 953, 966 (1986).

192. 108 S. Ct. 2428 (1988).

the heart of perhaps the most vexing problem facing public utilities—how to allocate the billions of dollars of costs associated with cancelled nuclear plants. The fact that electric utilities must satisfy two regulatory authorities that may have different views about what constitutes a prudent investment further complicates the problem. More to the point, state regulators are more likely to protect their own ratepayers than are federal regulators and FERC has been more generous to the electric industry than many states.[193] In *Mississippi Power & Light,* the Court held that once FERC allocates power among members of an interstate system, the state PUC cannot conduct a prudency review regarding the purchase of that power by individual members. With reference to the filed rate doctrine, the Court relied on *Nantahala* in holding that the FERC allocation preempts these state prudency reviews.

Middle South Utilities (MSU) is a holding company that wholly owns the stock of four operating companies, including Mississippi Power & Light Company (MP&L). The four operating companies engage in selling wholesale power among themselves and to other companies outside the system. The operating companies sell retail power in their separate states. MP&L sells retail power in Mississippi. A contract filed with FERC guided wholesale transactions among the four companies. Pursuant to that contract, MP&L was assigned the responsibility of constructing two nuclear power facilities known as Grand Gulf 1 and Grand Gulf 2. Because the nuclear project was too large for one utility to finance, MSU formed a new subsidiary called Middle South Energy, Inc. (MSE), which acquired full title to Grand Gulf.

By the late 1970s, it became apparent that Grand Gulf's capacity was unnecessary and that the project had cost overruns six times greater than anticipated. The decision was made to finish Grand Gulf 1 and to halt construction on and cancel Grand Gulf 2. In 1982, MSU filed a contract with FERC which set wholesale rates for MSE's sale of Grand Gulf 1 power and assigned proportionate shares to the four operating companies, including MP&L. After reviewing the filed contract, FERC reallocated power among the operating units in order to equalize costs in a just, reasonable, and nondiscriminatory manner.[194]

FERC did not explicitly address the prudency of completing Grand Gulf 1. Instead, FERC accepted the testimony of MSU officials that Grand Gulf 1 would meet system needs. The United States Court of Appeals for the D.C. Circuit affirmed FERC's order that the operating companies share the cost of Grand Gulf in proportion to their relative demand for energy generated by the system as a whole.[195]

Meanwhile, before the Mississippi Public Service Commission (MPSC), MP&L filed for a rate increase to cover the costs of its share of Grand

193. *See* J. TOMAIN, NUCLEAR POWER TRANSFORMATION ch. 5 (1987).

194. MP&L's share after the FERC reallocation was the same share as per the contract.

195. Mississippi Industries v. Federal Energy Regulatory Comm'n, 808 F.2d 1525 (D.C. Cir.), *cert. denied,* 108 S. Ct. 500 (1987).

Gulf. MPSC initially denied MP&L any rate relief for Grand Gulf 1 and then awarded emergency rate relief to keep MP&L solvent. On appeal, the Mississippi Supreme Court ruled that MPSC overstepped its authority to award rate relief until a prudency determination had been made. The court specifically rejected MP&L's argument that *Nantahala* precluded the MPSC from ignoring FERC's allocation of wholesale rates, reasoning that *Nantahala* was silent regarding prudency, and that such a review was within the province of the state commission. In further support of its reasoning, the court noted that FERC made no prudency determination, and therefore, the matter was left open for state determination in setting retail rates. The court then remanded the case to MPSC for a prudency review.

In the United States Supreme Court, MP&L argued that FERC's allocation preempted the state determination and the Court agreed. The Court stated that

> our decision in *Nantahala* rests on a foundation that is broad enough to support the order entered by FERC in this case and to require the MPSC to treat MP&L's FERC-mandated payments for Grand Gulf costs as reasonable incurred operating expenses for the purpose of setting MP&L's retail rates.[196]

Put even more starkly, the MPSC was precluded from determining the prudency of the Grand Gulf 1 project even though the issue was never explicitly addressed either before FERC or in the D.C. Circuit.

In issuing its ruling, the Court articulated three principles. First, FERC has exclusive authority to determine the reasonableness of wholesale rates. Second, FERC's exclusive authority also extends to power allocations that affect wholesale rates. Third, states may not bar regulated utilities from passing through to retail customers FERC-mandated wholesale rates.[197] With these rules, the Court tries to establish a bright line between federal and state authority. The Court's bright line is that states may not regulate in areas where FERC has exercised its jurisdiction to determine just and reasonable wholesale rates or to insure that agreements affecting wholesale rates are reasonable.[198]

The Court also wanted to prevent state commissions from "trapping" federally approved rates. If, for example, FERC approved a $500 million capital investment in a nuclear plant, and the state PUC approved only $400 million of that, then $100 million would be "trapped" by the PUC determination. The so-called trapped amount could not flow through to ratepayers. The real significance of the discussion of trapping is cost allocation. Under *Mississippi Power & Light,* which precludes trapping, all FERC approved costs pass through to ratepayers. Under the MPSC allo-

196. Mississippi Power & Light v. Mississippi Pub. Serv. Comm'n, 108 S. Ct. 2428, 2438 (1988).

197. *Id.* at 2439.

198. *Id.* at 2440.

cation, all of the costs that are not passed through to ratepayers must be absorbed by shareholders.

By extending *Nantahala* in *Mississippi Power & Light,* the Court extended the doctrine that states cannot question wholesale rates set by FERC (the *Narragansett* doctrine)[199] and effectively swallowed the exception that states may question the prudency of purchasing a certain quantity of FERC approved wholesale power. According to one commentator, *Mississippi Power & Light* will likely have the following effects:

> (1) To encourage electric utilities to operate through integrated systems in which generating capacity is owned and operated by subsidiaries and in which wholesale power is sold to separate operating units which engage only in retail distribution, thus establishing a "safe harbor" from state regulation;
> (2) to increase the participation of state commissions and consumer interest groups before FERC; and
> (3) to restrict the ability of state commissions to disallow expenditures made for construction and energy purchase costs.[200]

The three electricity cases, no less so than the natural gas decisions, demonstrate that energy policymaking is being centralized in the federal government. More significantly, the cases suggest that federal deregulation may preclude state energy regulation. Even though *Arkansas Electric* upheld the state exercise of jurisdiction over wholesale rates, Justice Brennan's dicta inaugurated a discourse about the extent to which deregulation implicates preemption. The tilt toward preemption increased in *Nantahala* and *Transco* and even more so in *Mississippi Power & Light.*

Read together, this group of six cases set up the question posed earlier: Does federal deregulation of energy markets preempt states from regulating those markets? In the 1987 Term, the Supreme Court again addressed the question and answered in the negative.

C. "Legislating" a Free Market in Energy

The case that raised these intriguing issues in the 1987 Term was *Puerto Rico Department of Consumer Affairs v. Isla Petroleum Corp.*[201] In *Isla Petroleum* the oil company petitioners argued that federal deregulation of the oil industry stood for free market controls and inferred preemption of state regulation. In 1973, in response to disruptions in world oil markets, Congress passed the Emergency Petroleum Allocation Act (EPAA),[202] which

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199. Narragansett Electric Co. v. Burke, 381 A.2d 1358 (R.I. 1977), *cert. denied,* 435 U.S. 972 (1978).

200. Norris, *The Shrinking of State Rate-making Power — Lessons from Grand Gulf,* PUB. UTIL. FORT., Aug. 4, 1988, at 45.

201. 108 S. Ct. 1350 (1988).

202. 15 U.S.C. §§ 751-760(h) (1982).

empowered the president to promulgate oil pricing and allocation controls, which he did.[203]

Prior to the enactment of the EPAA, the Commonwealth of Puerto Rico regulated gasoline and petroleum product prices. These regulations were suspended during the period of federal regulation. In 1975, Puerto Rican regulatory authority was restored. In 1986, nearly five years after federal price controls expired, the Puerto Rico Department of Consumer Affairs passed a series of oil regulations. These regulations included an excise tax on oil refiners and a maximum profit margin on sales by wholesalers to retailers.

Several oil companies contested the constitutionality of the oil regulations, arguing that federal deregulation meant that oil was to be traded on the market free from state interference. The Supreme Court did not agree with the oil companies' argument. After discussing other important energy law cases,[204] Justice Scalia wrote:

> [The oil companies] have brought to our attention statements that may reflect general congressional approval of a free market in petroleum products, or general congressional belief that such a market would result from enactment of the EPCA, or even general congressional desire that it result. But unacted approvals, beliefs, and desires are not laws. Without a text that can, in light of those statements, plausibly be interpreted as prescribing federal pre-emption it is impossible to find that a free market was mandated by federal law.[205]

It is indeed a strange world when a unanmious[206] Rehnquist Court in an opinion written by Justice Antonin Scalia rejects the free market and allows state regulation in a federally deregulated market.[207] That, however, was exactly the effect of the Court's holding. The holding does not say that the federal government cannot legislate in favor of a free market. Rather, the *Isla Petroleum* decision simply says that unless the federal government clearly indicates its intent to rely on a free market, states can regulate. The current state of the law is that deregulation alone does not

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203. The EPAA was extended in the Energy Policy and Conservation Act of 1975, Pub. L. No.94-163, 89 Stat. 871 (1975) (codified in various sections of U.S.C.).

204. *See* Transcontinental Gas Pipe Line Corp. v. State Oil & Gas Bd., 474 U.S. 409 (1986) (deregulation and preemption of the natural gas market) (discussed *supra* notes 179-83 and accompanying text); Arkansas Elec. Co-op. v. Arkansas Pub. Serv. Comm'n, 461 U.S. 379 (1983) (deregulation and preemption of electricity) (discussed *infra* notes 185-88 and accompanying text).

205. Puerto Rico Dept. of Consumer Affairs v. Isla Petroleum Corp, 108 S. Ct. 1350 (1988).

206. Justice O'Connor took no part in the opinion.

207. It is no less strange to have Justice Brennan write that congressional inaction may serve to preempt state legislation in favor of a free market. *See* Arkansas Elec. Co-op. v. Arkansas Pub. Serv. Comm'n, 461 U.S. 375 (1983) (discussed *supra* notes 185-88 and accompanying text).

create a free market. The more extreme case regarding the constitutionality of a congressional declaration that neither the federal nor state governments will regulate energy markets is yet to be brought before the Court.

D. The Supreme Court and Energy Policy

Besides noting a trend of centralization and preemption, the Court apparently has reached an "efficient" solution in most of the cases examined.[208] In each of the natural gas cases, pipelines were big winners because the Court's rulings have the effect of reducing the costs of doing business for pipelines. *Schneidewind* lowered the pipelines' cost of issuing securities; *Martin Exploration* lowered the purchase cost of "new tight formation gas" to the market price; and *Transco* lowered the cost of purchasing gas by not forcing pipelines to buy from persons with whom they had no contract.

The efficiency effects of the electricity cases are less clear. The electricity cases concern the allocation of authority to decide how costs will be spread. In *Arkansas Electric,* the state was permitted to regulate wholesale rates in the absence of federal regulation and in the face of congressional silence. In *Nantahala* and *Mississippi Power & Light,* FERC won the authority to administer filed contracts while preempting state regulators. The practical effect of this allocation of decisionmaking power is to streamline energy decisionmaking, with the likely consequence that federal regulators more often will protect shareholders over ratepayers.[209] Thus, in this series of opinions the Court allocates decisionmaking power between two competing claimants—the federal and state governments.

These Supreme Court cases underscore the role of federalism as energy decisionmaking and policymaking power is allocated between the federal and state governments. Furthermore, this allocation is consistent with the model of energy policy under review. Not only does the model foster intra- and interindustry competition in the private sector; the model also fosters an active energy federalism.

If anything is certain throughout the history of energy regulation, it is that energy regulation is a joint federal-state enterprise. Federalism in energy regulation is necessary because of two realities. The first is the geophysical reality that a large portion of natural resources are privately owned and fall under state jurisdiction. Also, because the federal government owns

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208. *See supra* note 172. If the preemption of a state regulation reduces the cost of doing business, then, under this simple definition, the decision can be called efficient. A more complete efficiency analysis, however, would compare the costs and benefits of two regulatory regimes. For example, in *Schneidewind* the Court invalidated a state securities regulation and in the text I wrote that this is an efficient decision. On a closer inspection, however, it may well be that the securities regulation may have generated a large set of benefits in consumer satisfaction greater than the costs to the pipeline of complying with the regulation together with the costs of administering the regulation. Unfortunately, that data is impossible to obtain and the more sophisticated efficiency analysis cannot be performed.

209. *See* D. ANDERSON, *supra* note 93; P. NAVARRO, *supra* note 93; J. TOMAIN, *supra* note 193.

one-third of the country's land and has jurisdiction over the outer continental shelf, natural resources used in energy production necessarily confront dual jurisdictions. The second reality necessitating federalism in energy regulation is the economic reality of national and international energy markets. These markets require coordination of supply and demand (and pricing) to maximize the efficiency of energy production, distribution, and consumption while keeping the United States an active player in global markets. Consequently, energy policy is developed in an active federal system, and the current shift toward centralized administration is most likely only temporary, as accommodations and compromises are made, and as conflicts and disagreements are resolved between and among the federal and state governments.

VI. Conclusion

If the model described above holds true, and history tells us that it should, then the Bush Administration may want to adopt one or more of the following energy policies that fall within the boundaries imposed by the dominant model:

(1) increase efficiencies in electricity production through encouragement of mergers, consolidations, power pooling, and central dispatching;
(2) favor a slight federal centralization in electricity regulation as a result of *Mississippi Power & Light* with a concomitant reduction of state regulatory power;
(3) experiment with deregulation of bulk power sales of electricity;
(4) increase investment in new electricity generating technologies either by traditional utilities or by new entrants such as QFs, IPPs, and self-generators;
(5) increase federal regulation of open access of natural gas and electricity transmission systems;
(6) encourage slight price rises in oil and natural gas;
(7) maintain environmental regulations on fossil fuels;
(8) encourage state regulatory protection for captive gas and electricity consumers to assure reliability and fair rates;
(9) engage in rate experimentation and differential rate treatment such as market-based or avoided-cost rates for competitive/interruptible customers and cost-of-service rates for firm/captive customers;
(10) reduce service obligations and encourage more open franchise areas for public utilities in exchange for greater diversification and a more liberal use of the prudent investment standard in ratemaking;
(11) continue the hiatus on nuclear power development in light of the demand for tightened safety standards and concerns over long-term waste disposal; and

(12) increase federal investment in alternative resources, technologies, and conservation.

Generating a laundry list of energy policies is relatively easy because the basic energy model has lasted for nearly a century. Just as the federal government is loosening its utility-type regulations and is depending more on the market, state governments are tightening traditional utility-type regulation and are more closely scrutinizing the utilities under their charge. When federal and state regulations conflict to the point that one set of objectives cannot be accomplished because of the existence of another set of regulations, then the judiciary serves as a backstop to prevent the energy policymaking system from completely unraveling.

Federal and state regulations, and the tension between them, are consistent with the dominant model of energy policy which takes its cues from a market shaped by government-industry interactions. Government-industry interactions are based on a fundamental tradeoff. Government regulation aids industry in mimicking the market and achieving greater energy (and economic) efficiencies while simultaneously guarding against market power. Thus, the dynamic model of energy policymaking capitalizes on continuous inter- and intragovernmental political conflicts as much as it does on inter- and intra-industry economic competition in our mixed-market political economy.