WHITHER DEREGULATION: A LOOK AT THE PORTENTS

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INTRODUCTION

Memories of the year 2001 will be forever eclipsed by the horrific images of September 11. But, that singular tragedy aside, the new millennium was most ominously heralded by two tumultuous events—the crisis of electric power in California and the collapse of the world's largest electric trading corporation, Enron. Both of these events cast something of a cloud over the deregulation movement, which had been almost the signature cause of the 1980s and 1990s. Neither event sent a message that many people could agree upon, but both events were seized upon by "authorities" at every point of the ideological compass as proving or not proving what theretofore had been holy writ. Skeptics of deregulation, before then a timid lot, saw, particularly in the California events, a major setback to a campaign that had suffered few defeats up to that point.[1] People of contrary views were equally vociferous in claiming that all was well.[2]

The sinking of Enron, on the other hand, had less to do with the actual substance of electricity deregulation and more to do with the intangible significance of losing in veritable disgrace a company that had been the most powerful voice raised for deregulation.[3] Kenneth Lay, the leading figure at Enron, had been a top financial

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1. *See, e.g.,* Joseph Kahn & Jeff Gerth, *Collapse May Reshape the Battlefield of Deregulation*, N.Y. TIMES, Dec. 4, 2001, at C1 (quoting U.S. Representative Edward J. Markey of Massachusetts, "Enron is the sequel to California, it's all part of the one-year story line . . . . We can't leave energy products in the regulatory shadows. It hurts both investors and consumers.").

2. *See, e.g., id.* (quoting newly appointed Federal Energy Regulatory Commission (FERC) Commissioner Nora Brownell, "We have had a number of false starts, and it would be crazy not to take a look at the lessons we can learn . . . . But we should not leap to the conclusion that competitive markets do not work.").

3. *See* Laura M. Holson, *Californians See a Kind of Rough Justice for Enron*, N.Y. TIMES, Nov. 30, 2001, at C6 (quoting member of the California Public Utilities Commission that "Enron was the flagship for deregulation" and that its rapid downfall is likely to hasten the end of the State's "freewheeling experiment in energy deregulation").

contributor to the Bush presidential campaign,[4] an important formulator of the Bush energy plan[5] and a recipient of serious consideration as a member of the Bush cabinet.[6] His views carried great weight in circles that counted.

When the electrical system in California was beginning to become unglued, Irwin Stelzer, a leading economist especially knowledgeable about the "regulated industries," and known as a zealous advocate of free markets and business unhampered by regulation, wrote, "At minimum, deregulation is no longer clearly the wave of the future."[7] On the other hand, John Rowe, head of a giant electric utility, declared that there could be no turning back to traditional modes of regulation. "There isn't much choice," Rowe said. "We discredited the utility monopoly a long time ago."[8]

So where are we going? Do the troubles in California mean that the road to deregulation has been a blind alley and that we should begin plotting a new course? Has the subsequent shipwreck of Enron reinforced the signal to retreat? These are questions that policymakers and others are asking, and they are fair questions. An in-depth exploration is necessary if there is to be any hope of sup-

4. *See* Kurt Eichenwald, *Audacious Climb to Success Ended in a Dizzying Plunge*, N.Y. TIMES, Jan. 13, 2002, at 1 ("By the time Mr. Bush was inaugurated in January 2001, Enron and a number of its executives, including Mr. Lay, had contributed more money to Mr. Bush over his political career than anyone else, an amount exceeding $550,000. Enron then wrote a check for $100,000 for Mr. Bush's inaugural committee, and Mr. Lay added another $100,000.").

5. *See, e.g.,* Kahn & Gerth, *supra* note 1 (reporting that Mr. Lay had a thirty-minute meeting with Vice-President Cheney to discuss the Bush administration's new national energy policy, which included the long-time Enron goal of breaking up monopoly control of electricity transmission networks, and that "Enron also had an unusual opportunity to influence Mr. Bush's choices" for appointments to the FERC). R

6. *See, e.g.,* George Skelton, *As Philosophies Shift, State Could be Left in the Dark*, L.A. TIMES, Dec. 18, 2000, at A3 (noting that Lay "has been rumored to be in line for a cabinet post and is expected to exert major influence over energy policy"); Michael Davis, *No Ordinary Jeff: Skilling Will Take Reins at Enron*, HOUSTON CHRON., Dec. 14, 2000, Business, at 1 (reporting that the timing of the CEO announcement at Enron may be tied to the likelihood that Lay will take a cabinet position in the Bush Administration); Sam Attlesey & Arnold Hamilton, *Analysts Ponder What Bush Cabinet Would Look Like: Family Ties, Bipartisanship Expected*, DALLAS MORNING NEWS, Nov. 29, 2000, at 20A (reporting Lay as one of several Texans being considered for a cabinet position).

7. Irwin Stelzer, *Long Hot Summer for Advocates of the Free Market*, SUNDAY TIMES (London), Sept. 3, 2000, Business, at 4 (discussing intervention by state authorities in the deregulation process due to high prices and consumer protests).

8. Melita Marie Garza, *No Turning Back, Exelon Chief Says; No California Chaos Seen in Illinois Changes*, CHI. TRIB., Aug. 7, 2001, § 3 (Business), at 3 (commenting at roundtable discussion at the American Bar Association's annual meeting).

plying an informed answer. But it must be an exploration that takes nothing for granted and is free of unshakable preconceptions. Bearing this firm resolution in mind, Part I of this Article begins with a discussion of the rationales for economic regulation of certain industries. Part II then summarizes the what and why of deregulation in various industries, including telecommunications, airlines, railroads, natural gas, and electricity, and explores the ideology that drives this movement. Part III chronicles the events of the California energy crisis, the threat it posed to the well-being of the State, how regulatory interventions calmed its fury, and what this (together with the demise of Enron) might all mean to a nation accustomed to following California's lead. But first, we must descend into the murky depths of economic theory.

I.
REGULATED INDUSTRY—THE FUNDAMENTALS

A. Economics

When we speak of regulated industry, we bring to mind those typically capital-intensive industries that provide the infrastructure undergirding the rest of the economy, the industries where entry and prices have traditionally been subject to direct administrative control by the government. These are businesses that provide electric power, natural gas, transportation, telecommunications service, and the like. As noted, these industries are usually capital-intensive, meaning that the capital invested in them is high in relation to the revenues they can generate. In the case of electricity generation, the ratio of capital invested to annual revenues is almost four to one.[9] This means that an electric generating plant must have been providing power for around four years just to yield revenues equal to all the capital invested.[10] In "unregulated" businesses (not surprisingly, all those not "regulated"), there are usually several companies competing in a market, and competition presumably drives price toward cost and brings supply into balance with demand.

In the case of some of the usually capital-intensive infrastructure industries, however, competition may be precluded. So much capital must be invested before the company even begins collecting its bills, that over a broad range the cost of each additional unit of output will continue to decline as more and more units are produced. The reason for this is that, as production rises, soaring capi-

9. *See* CHARLES F. PHILLIPS, JR., THE REGULATION OF PUBLIC UTILITIES: THEORY AND PRACTICE 54 (3d ed. 1993).

10. *See id.*

tal costs will be spread over more and more units, and the cost per unit will continue to decline. Since in this kind of enterprise costs will continue to drop as output rises over a relevant range, having more than one company would be inefficient.[11] The lowest cost per unit can be realized by simply increasing the production rate of the original company. The producing company is enjoying what, in the inscrutable lexicon of economics, are called "economies of scale."[12] The bigger this kind of company is and the more it can produce, the cheaper will be the product (in effect, "cheaper by the dozen"). In the case of this sort of company producing this kind of service, there is no room for more than one company and no room for competition. An enterprise enjoying these "decreasing costs" and realizing "economies of scale" is called a "natural monopoly" for the obvious reason that it operates more efficiently without competition.[13]

This is the sort of reasoning economists would follow to justify the traditional practice of setting up various kinds of infrastructure companies as monopolies with assigned service franchises. This is the way, for example, telephone and electric companies have been constituted historically. And bureaucratic price and other controls have been imposed on such companies because, being monopolies, they are not subject to the discipline of competition. But over the

11. For a useful primer on the economic principles that have governed many infrastructure industries, at least in their early days, see *id.* at 51-54 (discussing economies of scale and scope and characteristics of natural monopolies, in which a socially optimal level of price and output in a given market is achieved through the regulation of a single supplier).

12. *See id.*

13. Professor Phillips describes the economic conundrum of a natural monopoly as follows:

> The inherently noncompetitive market structure [of a natural monopoly] . . . is determined by economies of scale (of the long-run variety) and/or economies of scope. Competition may exist for a time, but only until bankruptcy or merger leaves the field to one firm. Competition is self-destructive and results in a waste of scarce resources. Conceivably, the two or three firms could make an agreement to share the market. Neither the firms nor the public would benefit should this occur. The firms would be high-cost producers and the consumers would be denied the benefits derived from economies of scale and/or scope. . . . But the mere fact that a monopolist is allowed to exist does not assure the public of obtaining the benefits of whatever lower costs are achieved. In fact, the monopolist might absorb not only the benefits resulting from the lower cost, but also might raise prices. Consequently, the presence of a monopolist calls for some degree of public regulation.

Id. at 53-54 (footnotes omitted).

last several decades, these regulated industries have been "deregulated," one by one.[14]

Deregulation involves the removal of some or all of the administrative controls, and also entails entry of additional firms into the market to provide competition. It may, in addition, involve the disaggregating of functions that were bundled together by the monopoly firm. As to some of these functions, there may be competition; as to others, there may be none. From an economic point of view, it is assumed that companies, or functions, chosen for deregulation have exhausted their economies of scale; bigger is no longer cheaper, and, in fact, these companies hopefully now fit with ease into the competitive sector.[15] Therefore, in the view of most economists, they should no longer enjoy monopoly franchises and should be exposed to competition like everyone else. All regulated industries do not, by any means, display all the economic characteristics of natural monopolies, but they may encounter a more determinate category, "market failure," for which regulation rather than market competition has to be the cure.[16]

In electric power, which has been the last infrastructure industry to be deregulated,[17] actually only electricity *generation* has been deregulated; transmission and distribution are to continue as regulated functions, since they seem to be natural monopolies.[18] Generating plants, some of which belong to existing utilities and some of which belong to new unregulated generating companies, are to

14. As one of the leading texts on regulated industries has noted, the term "deregulation" is an imprecise way of describing the regulatory shifts of recent years. *See* JEFFREY L. HARRISON ET AL., REGULATION AND DEREGULATION: CASES AND MATERIALS 18 (1997) ("[W]hen you think of deregulation it is tempting to assume the government has stepped aside entirely and allowed competitive forces to take over. . . . Sometimes, 'deregulation' is used to describe situations in which the pervasiveness of regulation has been reduced. . . . [E]ven with more 'deregulation,' our economy is likely to continue to be highly regulated.").

15. *See* Jim Rossi, *The Common Law "Duty to Serve" and Protection of Consumers in an Age of Competitive Retail Public Utility Restructuring*, 51 VAND. L. REV. 1233, 1277 (1998) (commenting that in the 1960s and 1970s, "utilities began to exhaust economies of scale in power production; power production was no longer considered a natural monopoly, but was viewed as competitive, or at least contestable," thus setting the stage for deregulatory efforts).

16. *See* PHILLIPS, *supra* note 9, at 60-73 (describing various types of imperfections in market structure that can be mitigated by regulation). R

17. *See* Rossi, *supra* note 15, at 1277 (noting that reforms in the electricity industry only occurred after the deregulatory movement had produced "significant changes in the railroad, trucking, airline, telecommunications, financial services, and natural gas industries"). R

18. This is the premise which underlies the provisions relevant to electricity of the Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776.

compete with one another and thereby hopefully increase efficiency and lower prices.[19]

B. Other Rationales for Regulation

These are some of the economic principles underlying regulation and deregulation. Another, less rigorous approach to regulation is based on the renowned old case of *Munn v. Illinois*.[20] This case involved maximum prices charged by grain warehouses in Chicago in the 1870s. The warehouse owners had agreed upon a price per bushel of grain for storage, which the state regarded as excessive. The issue before the United States Supreme Court was whether the fixing of a price ceiling by the Illinois legislature was a taking of property without due process of law in violation of the Fourteenth Amendment.[21] Grain warehouses, although there were only fourteen of them in Chicago in the 1870s,[22] were not natural monopolies, so if regulation were the goal, a justification for it would not have emerged, clear as crystal, from present-day economic analysis. Instead of academic economics, the Court turned to the traditional common law as recognized in England and in the American colonies, long before the adoption of the Constitution, governing innkeepers, common carriers, hackmen, bakers and the like and permitting regulation of prices ostensibly for the common good.[23] As a slightly more current precedent, in 1820, Congress had exercised some control of prices in Washington, D.C.[24] From these sources the Court derived the principle that, "Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large."[25] The Court went on to elaborate the rights and obligations associated with "property affected with a public interest."

These concepts, of course, are far from precise, as Justice Field in dissent was quick to point out. He wrote, "The defendants were no more public warehousemen . . . than the merchant who sells his

19. *Id.*

20. 94 U.S. 113 (1876).

21. *Id.* at 123. Similar questions would arise in a variety of contexts in the subsequent history of the country. *See, e.g.*, West Coast Hotel v. Parrish, 300 U.S. 379 (1937) (considering constitutionality of minimum wage law for women); Nebbia v. New York, 291 U.S. 502 (1934) (minimum price controls on milk); Lochner v. New York, 198 U.S. 45 (1905) (maximum hours of work in bakeries).

22. 94 U.S. at 131 (noting that "it must also be borne in mind that" these fourteen warehouses were controlled by only nine businesses).

23. *Id.* at 130-32.

24. *Id.* at 125.

25. *Id.* at 126.

merchandise to the public is a public merchant, or the blacksmith who shoes horses for the public is a public blacksmith; and it was a strange notion that by calling them so they would be brought under legislative control."[26] *Munn*'s approach seems to call for some sort of intuition about what kind of property may be said to be "affected with a public interest."

Nonetheless, *Munn* may make as much sense as an economics treatise. The case seems to be pointing to the industries and professions that are more or less essential, where the provider generally has more bargaining power than the consumer, where price discrimination is particularly undesirable, and where competition, for one reason or another, is less than robust. These are not necessarily businesses where competition would fail entirely to do its economically appointed job. But they are perhaps occupations where consumers, because of defects in the market, would expect government to take a hand to see that they were getting a product or service at a fair price. A compelling reason for this expectation is that, at the time of *Munn*, there was no Sherman Antitrust Act; so there could be no expectation that unconstrained market competition would bring fair prices.[27] Thus, *Munn* is far from a complete stranger to economics, but neither is it bound hand and foot to economic theory.

II.
THE FOUNDATIONS OF DEREGULATION

This brings us back to deregulation and the questions: When did deregulation actually begin? And is the movement in that direction likely to continue? Regulation as a concept first came under serious fire as a result of critical writings, primarily the work of the Chicago School economists.[28] Much of the criticism involved the concept of "regulatory capture"—the idea that regulatory agencies tend to become the captives of the industries they are purporting to regulate.[29] As a result of these academic assaults, the prestige of regulatory agencies declined and the door was open for a sea

26. *Id.* at 138 (Field, J., dissenting).

27. The Sherman Act was enacted on July 2, 1890 (codified at 15 U.S.C. §§ 1-7).

28. *See, e.g.*, R. H. Coase, *The Federal Communications Commission*, 2 J.L. & ECON. 1 (1959); Harold Demsetz, *Why Regulate Utilities?*, 11 J.L. & ECON. 55 (1968); George J. Stigler & Claire Friedland, *What Can Regulators Regulate? The Case of Electricity*, 5 J.L. & ECON. 1 (1962).

29. *See* HARRISON ET AL., *supra* note 14, at 34 (describing threat of capture of regulatory body by industry it is supposed to regulate). R

change in thinking about the need for, and desirability of, direct regulation by administrative agencies. This movement is perhaps best illustrated by the decline of the Interstate Commerce Commission—the earliest federal regulatory agency and once the bellwether of prestigious independent regulatory agencies—to extinction under its own name and only imperfect resurrection as the Surface Transportation Board in the Department of Transportation.[30]

A. Telecommunications

After the academic foundation had been laid, the first steps toward deregulation seemed to take place in the telecommunications industry. A fledgling firm named Microwave Communications Incorporated (later known as MCI) proposed to the Federal Communications Commission (FCC) that it be certificated to build and operate a "private line" communications link between Chicago and St. Louis.[31] Private line service traditionally involved the leasing of telephone lines to large business customers, and MCI proposed to provide it by microwave transmission. MCI's service was to compete with service offered by the American Telephone and Telegraph Company (AT&T), which was the nationwide telecommunications carrier authorized as a monopoly by the FCC. AT&T's service presumably was provided by cable links. AT&T vigorously opposed MCI's application, claiming that the proposed service was not needed, and grounding its opposition partly on the thesis that MCI's entry into competition with AT&T would decrease the profitability of AT&T's service. This would undermine the strategy by which AT&T used revenues from its more profitable services to subsidize its less profitable ones, thereby offering service to everyone at a reasonable price. The FCC agreed with MCI, but its Chairman, Rosel Hyde, asserted in dissent:

> [MCI] has selected a major route, Chicago to St. Louis, with heavy traffic density characteristics and the concomitant lower unit costs. The existing common carriers, on the other hand have been encouraged by the Commission, primarily for social reasons, to base the rates both for [regular long distance] and private-line services on nationwide average costs. Thus the small users in the hinterlands is [sic] afforded the same rates as the large users in the major cities.[32]

30. *See* ICC Termination Act of 1995, Pub. L. No. 104-88, 109 Stat. 803.

31. *See In re* Applications of Microwave Communications, Inc., 18 F.C.C.2d 953, 953 (1969).

32. *Id.* at 972 (Hyde, Chairman, dissenting).

Chairman Hyde thus offered one of the classic arguments for regulation in the telecommunications industry, but it was a rationale not very often heard in subsequent years (mainly because the economists were not sympathetic to hidden cross subsidies). At the time, FCC Commissioner Johnson, in concurring with the Commission order, commented, "I am still looking . . . for ways to add a little salt and pepper of competition to the rather tasteless stew of regulatory protection that this Commission and Bell have cooked up."[33]

A little earlier, in 1968, the FCC had approved the sale of the Carterphone, a device to be placed in a telephone receiver to permit direct communication with a police officer at the other end of a two-way radio.[34] This was strenuously opposed by AT&T, who objected to it as a "foreign attachment" likely to damage the communications network.[35] The *Carterphone* decision signaled the arrival of competition in the telecommunications equipment business.

A few years later, the *Specialized Common Carrier Services* decision[36] allowed wide latitude for competition in new private line services like data transmission, facsimile transmission, remote metering and the like. This decision ordered AT&T, which owned the local telephone exchanges, to provide interconnection between the specialized carriers and their customers.[37] Later, the Court of Appeals for the District of Columbia Circuit, by reversing a FCC order confining MCI to private line service, opened the entire field of switched public message (ordinary long distance) service to competition.[38] The appeals court held that the FCC was without authority, by rejecting a tariff filing by MCI, to restrict MCI to private line service only.[39]

In 1974, the government commenced an antitrust suit against AT&T, charging monopolization. After the complaint was sus-

33. *Id.* at 978 (Johnson, Commissioner, concurring).

34. *See In re* Use of the Carterfone Device in Message Toll Tel. Serv., 13 F.C.C.2d 420 (1968).

35. *Id.* at 423-24.

36. *In re* Specialized Common Carrier Servs. In the Domestic Pub. Point-to-Point Microwave Radio Serv., 29 F.C.C.2d 870 (1971) (establishment of policies and procedures for consideration of application to provide such services).

37. *Id.* at 940.

38. *See* MCI Telecomms. Corp. v. FCC, 580 F.2d 590, 597 (D.C. Cir. 1978), *cert. denied*, 493 U.S. 980 (1978).

39. *Id.* (ruling that the FCC's narrow construction of AT&T's interconnection obligation is contrary to the court's previous rulings "that the carriers . . . would be afforded the necessary interconnections—until and unless it was found that the public interest demanded otherwise").

tained against a motion to dismiss, the suit was settled and a consent decree entered by the district court in 1982.[40] The decree required AT&T to divest the regional Bell operating companies, which owned the local exchanges.[41] Since then, there has been active competition in long distance and in many other telecommunications services among the numerous companies in the field.[42] Additional efforts to bolster competition were made in the Telecommunications Act of 1996.[43] Telecommunications companies enjoyed a boom and a stock market bubble in the 1990s, but, primarily due to overexpansion and overinvestment, there has been a crash—both in the real telecommunications economy and in the stock market.[44] The most successful companies at this point appear to be the Bell operating companies (formerly owned by AT&T), which retained their local service business, conducted through local exchanges—the natural monopolies.[45] There has also been extensive movement toward merger and consolidation in the industry (some of it re-aggregating companies disaggregated by the AT&T consent decree).[46] In evaluating the deregulated version of telecommunications, the public is modestly approving of competitive long distance service and of many "high tech" applications, but remains critical of the provision of such "low tech" services as direc-

40. *See* U.S. v. Am. Tel. & Tel., 552 F. Supp. 131, 225 (D.D.C. 1982), *aff'd sub nom.* Maryland v. United States, 460 U.S. 1001 (1983).

41. *Id.* at 141.

42. *See* HARRISON ET AL., *supra* note 14, at 17 (observing that the AT&T settlement "led to a substantial increase in firms providing discount long distance service and a broad range of facsimile, cellular and other communication services"). R

43. Pub. Law 104-104, 110 Stat. 56 (1996).

44. *See* Floyd Norris, *After the Shock: Is This the Bottom?,* N.Y. TIMES, Oct. 7, 2001, § 3 (Money & Business), at 1 (noting that the current economic slowdown "had been preceded by an incredible boom . . . in the technology and telecommunications industries. That boom had both contributed to and been enhanced by the stock market bubble, which sent stocks of such companies to dizzying heights and gave them all the money they could use for investment.").

45. *See* Stephanie N. Mehta, *They Don't Look Like Babies or Bells Anymore*, WALL ST. J., May 18, 1999, at B1 (reporting on the extensive transformation of the "Baby Bells" into full service "supercarriers" since the breakup of the old AT&T in 1984, attributing change to deregulation and to the competitive challenges presented by a host of upstart competitors).

46. *See* Stephen Labaton, *F.C.C. Chief Says Phone Deal Faces Stiff Review*, N.Y. TIMES, Oct. 6, 1999, at A1 (discussing wave of mergers in the telecommunications industry, including "SBC's $72 billion acquisition of Ameritech, a deal that will trim the number of so-called Baby Bells from five to four"); Seth Schiesel, *AT&T and British Telecom Merge Overseas Operations*, N.Y. TIMES, July 27, 1998, at A1 ("As communications companies have scrambled in recent years to achieve the size believed necessary to compete on a global scale, the seven Baby Bell regional phone companies have agreed to merge into four.").

tory assistance and maintenance and repair of equipment on customers' premises.[47]

I was exposed to some aspects of the transition of telecommunications to competition, when I served on the panel and wrote the opinion in an antitrust suit brought by MCI against AT&T.[48] MCI charged AT&T primarily with refusals to interconnect and predatory pricing.[49] MCI won a judgment for $1.8 billion at trial (at that time the world's record), but in the new trial ordered on appeal lost most of it. Judge Harlington Wood, Jr. wrote a dissent, and, as I recall, our respective views of predatory pricing made for the differences in the appellate outcome.[50] I found predatory pricing to be a mysterious and elusive phenomenon—but a fascinating one, nonetheless. It was a great case.

B. Airlines

While these historic events were transpiring in the regulation and deregulation of telecommunications, a similar course was being followed in the quite dissimilar airline industry. Dr. Fred Kahn (a friend and eminent regulatory economist) was named Chairman of the Civil Aeronautics Board (CAB) in 1977 and promptly set the airlines on a course toward deregulation.[51] Although Kahn could accomplish a good deal by administrative action, legislation was necessary for decisive changes. So, in 1978, Congress passed the Airline Deregulation Act.[52] This legislation, sponsored by an unlikely senator—Ted Kennedy—abolished the system of administrative awards of airline routes and the related regulatory regime, and decreed that the CAB would be dismantled at a future date. This was a pretty thorough deregulatory stroke and moved the airlines from a format of regulated competition to a regime of supposedly

47. *See, e.g.*, Caroline E. Mayer, *Behind the Big Promises, Fine Print,* WASH. POST, June 9, 2000, at A1 (reporting on FCC statistics suggesting that low rates in the telephone industry are often accompanied by stupefying fine print and inadequate customer service and quoting one consumer advocate, "Ten years ago, companies provided real service to consumers, but in this booming economy that doesn't seem to be a priority. . . .").

48. *See* MCI Communications Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081 (7th Cir. 1983), *cert. denied*, 464 U.S. 891 (1983).

49. *See id.* at 1092.

50. *See id.* at 1175 (Wood, J., dissenting) (acknowledging majority's position that the appropriate standard for determining predatory pricing was whether the price fell below the long-run incremental cost, but arguing that a more wide-ranging inquiry that took non-economic factors into account was appropriate).

51. *See* HARRISON ET AL., *supra* note 14, at 16. R

52. Airline Deregulation Act of 1978, Pub. L. 95-504, 92 Stat. 1705 (1978).

wide-open competition. There was general agreement at the time (though not at the time of the 1938 Act creating the CAB[53]) that airlines exhibited no economies of scale and thus were not natural monopolies. Evidence from intra-state airlines in Texas and California suggested that lower fares were possible absent the regulatory hand and governmental guidance.[54] Complete deregulation was arguably what the doctor ordered. Load factors have jumped and fares for discretionary travel have dropped as a result.[55] On the other hand, there have been complaints about high regular business fares, about service and fares to smaller cities, about in-flight comfort, and some other matters.[56] The problem of fares to smaller cities has its origin in the abandonment of average costing (as I have noted, also a big issue in telecommunications) and the adoption of an approach based on elasticity of demand, whereby the routes with the most competition would command the lowest fares. This is the best way to fill up the airplanes, but travelers to and from small cities are not happy. Also, measured against cost, the new airline pricing is grossly discriminatory, with multiple fares for travel between the same cities.

One development associated with airline deregulation was an apparent upsurge in mergers and consolidations in the 1980s,[57] resulting generally in greater concentration of gates at hub airports. Merger mania, though quiescent in the nineties, has recently reasserted itself. The multiplicity of mergers can be explained in terms of the economies of coordination associated with a network industry. There are also indications that mergers and consolidations proliferate in every regulated industry when time comes for deregulation, probably because of the increased risks that deregula-

53. *See* Civil Aeronautics Act of 1938 (McCarran-Lea Civil Aeronautics Authority Act), Pub. L. No. 107-48, ch. 601, 52 Stat. 973.

54. *See* HARRISON ET AL., *supra* note 14, at 165; STEVEN A. MORRISON & CLIFFORD WINSTON, THE EVOLUTION OF THE AIRLINE INDUSTRY 132-33 (1995) (noting that Southwest Airlines, which originated in Texas, is the "industry's premier low-cost carrier," and that it "reduces the fare of every carrier it competes with"). R

55. *See* Richard D. Cudahy, *The Folklore of Deregulation*, 15 YALE J. ON REG. 427, 431-33 (1998) (discussing how price discrimination, which has been permitted in the aftermath of airline deregulation, has generally favored discretionary travel).

56. *See id.* (noting customer complaints in the aftermath of deregulation, including "sardine-like seating and unsavory victuals," but also acknowledging the economic rationale that "travelers provided with the elusive treasure of 'choice' have opted for cheap seats shorn of amenities").

57. *See* MORRISON & WINSTON, *supra* note 54, at 19 (noting "merger wave" that reshaped competitive landscape of airline industry in the mid-1980s). R

tion presents.[58] The expectation that airline deregulation would bring numerous Mom and Pop-sized airlines competing aggressively for business has proved to be a pipe dream. Downturns in the economy have washed out smaller competitors, and the pressures to merge have been ever present. Last year, the government succeeded in blocking (somewhat to the satisfaction of United Airlines by that time) the proposed merger of United and U.S. Airways.[59] I believe that some merger involving U.S. Airways may take place eventually; U.S. Airways is not at this moment a "failing" airline, but it currently seems weak enough to see failure just around the corner.[60]

Of course, all airlines were weakened by the events of September 11, and there may be need for more regulation to improve their financial health. The fact is that regulation came to the airlines in 1938 to improve the financial health of what was then an infant industry. It is by no means unlikely that history will repeat itself,[61] since, when times are difficult, the airlines seem to do better with managed competition than with the footloose and fancy-free variety.

C. Railroads

While the airlines were being cut loose from regulation and were undergoing a process of consolidation, the railroads were following very much the same path. Railroads could not be as thoroughly freed from regulatory strictures as airlines because railroads retained some monopoly characteristics as to some commodities (such as coal on its way to fuel power plants). But railroads in their deregulated state were even more zealous than airlines in pursuing mergers. Perhaps their regulation by the Interstate Commerce Commission (ICC) (now reborn as the Surface Transportation

58. Richard D. Cudahy, *The FERC's Policy on Electric Mergers: A Bit of Perspective*, 18 ENERGY L.J. 113, 113 (1997).

59. At the time of this writing, United Airlines appears to face a real prospect of entering bankruptcy. Laurence Zuckerman, *As United Air Struggles, Talk Among Analysts Turns Downbeat,* N.Y. TIMES, Feb. 1, 2002, at C2 (reporting that "[s]everal industry experts and two senior executives at rival airlines said they were beginning to conclude that United, widely considered the most troubled of the domestic airlines, would have no choice but to file for Chapter 11 bankruptcy protection later this year if it were to have any hope of turning itself around").

60. Laurence Zuckerman, *US Airways' Top Executive Is Leaving at a Critical Time*, N.Y. TIMES, Nov. 28, 2001, at C2 (noting that after the September 11 terrorist attacks, "US Airways has been on the short list of airlines judged most likely to file for bankruptcy because of a steep drop in passenger traffic").

61. *See* Zuckerman, *supra* note 59. R

Board (STB)) had something to do with this. For the STB is influenced by the history of railroad legislation and regulation, which over many years favored consolidation and seemed not to be vitally interested in competition and antitrust standards.[62] Currently, there are only two major railroad systems remaining in the western United States and only two in the East.[63] The recent merger of the Union Pacific and the Southern Pacific proved somewhat embarrassing to the regulators, since service on the surviving Union Pacific was disrupted for a long time after the merger. It was primarily this situation that caused the Board to defer consideration of a proposed merger of the Burlington Northern Santa Fe with the Canadian National (a transcontinental Canadian railroad), which would have brought to life the venerable dream of a coast-to-coast railroad,[64] mostly in the United States. Extensive track abandonment and consolidation have improved the financial health of the railroads, and they seem to be operating successfully, at least for the time being, in a partially deregulated mode.

D. Natural Gas

Natural gas pipelines have been deregulated by "unbundling" the transportation function from the sales or merchant function and providing open access to customers and producers to the pipelines' transportation service.[65] Now, for the most part, larger end users and distributors buy gas directly from producers, and the pipelines are required to transport the gas without discrimination. The FERC adopted a number of orders to preclude discrimination in favor of the pipeline's own gas when it was acting as a

62. *See, e.g.,* Penn Central Merger Cases, 389 U.S. 486, 492 (1968).

63. Burlington Northern Santa Fe and Union Pacific are the major railroad systems in the West; CSX and Norfolk & Southern are the major railroad systems in the East.

64. Jay Gould, one of the old railroad buccaneers, had this vision. *See* Bloomberg News, *Regulator Downplays Transcontinental Rail Talk*, OMAHA WORLD HERALD, Mar. 26, 1997, at Bus. 22 (reporting observations of Clemson history professor that "Americans have been dreaming of a coast-to-coast railroad since Jay Gould tried to put one together in the 19th century and missed by 40 miles of track"); Charles V. Bagli, *Rail Systems That Stretch Coast to Coast May Be in Sight*, N.Y. TIMES, Mar. 5, 1997, at D1 (reporting on prospects for the first transcontinental railroad and discussing failed attempts dating back to the turn of the century, including one by the son of Jay Gould, who inherited his father's rail empire).

65. *See* United Distribution Cos. v. FERC, 88 F.3d 1105 (D.C. Cir. 1996), *cert. denied sub nom.* Associated Gas Distribs. v. FERC, 520 U.S. 1224 (1997) (summarizing actions by the FERC leading to deregulation of the natural gas industry, and including the cornerstone policy of "open access").

merchant.[66] In a number of respects, natural gas was to be the model for electricity deregulation, but in practice electricity has proven more challenging.

E. Electricity

In fact, trying to apply competition to electric power was the ultimate challenge since, in part because of its extreme capital intensiveness, the production of electricity had always been thought of as the quintessential natural monopoly. For years the mere mention of competition in electricity brought visions of two sets of electric power poles running down opposite sides of the same street. However, a serious notion of applying competition to electricity first popped up in 1978 federal legislation, which gave small producers of renewable power (solar, wind, geothermal, etc.) a guaranteed market with utilities.[67] The latter were required to buy this power at the utilities' avoided cost of generation—that is, the cost the utilities would have had to incur to provide generating capacity equivalent to that offered by the independent producer.[68]

As I have mentioned, competition in electricity was limited to the generation function, since both transmission and distribution were thought to be natural monopolies; but generation was believed to have exhausted its economies of scale and to be open to competition. Another decisive step was taken in the Energy Policy Act of 1992,[69] which gave the FERC more effective authority (im-

66. These decisions are Order Nos. 436, 500 and 636. Their procedural and substantive meandering are remarkably complex. *See, e.g.*, Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, Order No. 436, 50 Fed. Reg. 50,408 (Oct. 18, 1985), *vacated and remanded*, Associated Gas Distributors v. F.E.R.C., 824 F.2d 981 (D.C. Cir. 1987), *cert. denied*, 485 U.S. 1006 (1988), *readopted on an interim basis*, Order No. 500, 52 Fed. Reg. 30,334 (Aug. 14, 1987), *remanded,* American Gas Association v. F.E.R.C., 888 F.2d 136 (D.C. Cir. 1989), *readopted*, Order No. 500-H, 54 Fed. Reg. 52,344 (Dec. 21, 1989), *reh'g granted in part and denied in part*, Order No. 500-I, 55 Fed. Reg. 6,605 (Feb. 26, 1990), *aff'd in part and remanded in part*, American Gas Association v. F.E.R.C., 912 F.2d 1496 (D.C. Cir. 1990) (commonly known as Order 436 and Order 500); Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation, Order No. 636, 57 Fed. Reg. 13,267 (April 16, 1992), *order on reh'g*, Order No. 636-A, 57 Fed. Reg. 36,128 (Aug. 12, 1992), *order on reh'g*, Order No. 636-B, 57 Fed. Reg. 57, 911 (Dec. 8, 1992), *aff'd in part and remanded in part*, 88 F.3d 1105 (D.C. Cir. 1996).

67. *See* Public Utility Regulatory Policies Act (PURPA) of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (codified in scattered sections of 15 U.S.C. and 16 U.S.C.).

68. *See* 16 U.S.C. § 824a-3; 18 C.F.R. §§ 292.303(a), (d), 292.304(b), (e) (2001).

69. *See* Energy Policy Act of 1992, § 722, 16 U.S.C. § 824(k) (1994).

proving on a seldom-used grant in 1978) to order utilities to provide transmission service (wheeling) to all who demanded it and which relaxed existing restrictions to permit growth of independent power producers (IPPs). The FERC moved a step farther in 1996 in its Order 888, requiring all utilities to publish nondiscriminatory open-access tariffs to be applied to other providers of electricity seeking to use their transmission system.[70] The order also required utilities to unbundle their transmission function from their generation function in the interest of effective competition. All these steps were taken with a view toward providing generating plants—whether owned by utilities or by independent concerns—an opportunity to compete for electric loads, through open access to transmission. The transmission network became, in effect, a common carrier of electric power. These arrangements provided all the tools needed for *wholesale* competition (competition to serve retail distributors, like utilities). But the strong push, primarily of large industrial customers (and these were the real force behind deregulation), was for *retail* competition (competition for end users). To large industrial users, cheaper power was worth fighting for.[71]

Retail competition would enable these big users of electric power to "shop" for power from distant generators and to have this presumably cheaper power brought in for their own use over intervening transmission systems, including the local utility's system. Or these large industrial customers could use their option to shop for cheap power to exert leverage over their local utility for lower rates.

The opportunity to shop became important in the 1970s and 1980s because wide disparities in the costs of power opened up between adjoining service areas and between different parts of the country. These disparities put a particular edge on the rising costs of power generally and created a sharp demand, particularly in industry, for some way to put a cap on costs. Before the 1960s, the price of electricity, even in nominal terms, had been declining decade by decade for sixty years.[72] This was primarily the result of employing ever-larger generating plants with associated economies of

70. *See* 18 C.F.R. pt. 35 (2001).

71. *See, e.g.,* Rossi, *supra* note 15, at 1275 & n.164 (noting that competition in electric utility industry has been motivated in large part by the interests of high-load industrial customers, and not by residential consumers). R

72. *See* William W. Hogan, *Electricity Market Restructuring: Reforms of Reforms*, at 3 (May 25, 2001), *available at* http://www.ksg.harvard.edu/hepg/Standard_Mkt_dsgn/Hogan_reformofreform_rut052501.pdf (last visited on Nov. 2, 2001) (noting "improved technology and further exploitation of economies of scale and scope had meant that electricity could be provided with constant or declining prices, in real and nominal terms").

scale, and of improvements in technology and metallurgy. After the 1960s, however, electric rates went through the roof as a result of general inflation, skyrocketing fuel costs, environmental costs, and big cost overruns on nuclear plants.[73] This was a whole new environment, in which the growth in usage of electric power dropped to zero or one or two per cent per year from its former seven per cent. Increasing costs tended to top out in the 1980s, but cost disparities and the shock of the recent sharp increases lingered on. Naturally, amid much talk of inefficiencies in the system, conversation turned urgently to the prospect of introducing competition.

As I have mentioned, the furnishing of electric power was an area where competition had been resisted traditionally on the ground that it was a natural monopoly, but this point was seriously questioned when costs were particularly inflated in pursuit of the newest technology—nuclear power. The general sense was that costs would not be driven down through the historic route of larger generating units. There were apparently no longer any economies of scale to be realized. There were indeed other half-apologetic objections to competition on the ground that electricity was different: it could not be stored; it had to be generated simultaneously with its use; and it could not be made to follow a prescribed route through a network—it would follow the path that the physics of the situation dictated. But in spite of these objections, only timidly interposed, the deregulation movement gained momentum: Its advocates promised the moon in terms of lowered costs, and this proved to be the ultimate problem. Expectations were raised so high by a mystical faith in markets to overcome all obstacles that the stage was set for bitter disappointment if actual experience failed to measure up to the promises.

F. Ideology

Perhaps underlying domestic enthusiasm for markets was the ideological tide running worldwide. The Soviet Union collapsed in 1991, and triumphalism swept the capitalist world. Markets were king, and who would question deregulation—even of electric power? Deregulation of electricity had been introduced in England by the Thatcher government, and there was an urgent push to catch up. In America, the stock market was putting a high premium on innovation, and power generators and energy traffickers like Enron sought to participate. Retail competition offered

73. *See id.* at 3 (table depicting both nominal and real price changes).

choice—in theory even to the smallest residential customer—and who would be so reactionary as to deny choice to the consumer?

The enthusiasm for deregulation (including retail competition) swept away all doubts, even on the part of utilities that would be losing their exclusive franchises. Soon the utilities were hard at work organizing unregulated subsidiaries to sell power to other utilities, while the mother corporation changed its name to something catchy, like Primergy.[74] The community of consultants and the brotherhood of bankers were starry-eyed in contemplating the Brave New World of competition from which they might profit handsomely. There was no visible opposition.

III.
THE CALIFORNIA CRISIS

Retail competition–choice for the ultimate consumer–was a matter for the states, which had always regulated local distribution.[75] At the state level, especially in states with high-priced electricity—like California, Illinois, New York, Pennsylvania and in New England—support for deregulation was widespread.[76] After all, conservatives thought it would mean less government, while liberals saw it as banning monopolies. Even the utilities were for it, provided they were compensated for their "stranded costs" (i.e., the value of plants and supply contracts rendered uneconomical by competition).

A. The California Deregulation Plan: The Blue Book

In California, a plan for deregulation called the Blue Book was developed by the California Public Service Commission under the

74. *See* Dave Pauly, Editorial, *A Primergy by Any Other Name Is Still a Utility*, DENV. ROCKY MOUNTAIN NEWS, May 7, 1995, at 110A (noting name changes of several electric utilities and commenting that "the executives who run them seem ashamed. How else do you explain their penchant for changing their original names to such obfuscations as Unicom Corp., FPL Group Inc. and SCEcorp?").

75. The Federal Power Act apportions regulatory authority between the states and the federal government. *See* 16 U.S.C. § 824(b)(1) (1994) (stating FERC shall generally "not have jurisdiction . . . over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter").

76. *See, e.g.,* Neela Banerjee, *States' Plans To Deregulate Get 2nd Look,* N.Y. TIMES, May 2, 2001, at A14 (noting impetus for electric deregulation was greatest in states like California, New York, and Pennsylvania, where lawmakers "thought they needed to take drastic action to drive down historically high electricity prices that had crippled business").

leadership of its Chairman, Professor Dan Fessler.[77] The Harvard Electricity Policy Group, headed by Professor William Hogan, played a major role in the evolution of the Blue Book into a finished proposal. Although these preparatory efforts were trashed as inadequate after the crisis developed later on, they were in fact thorough and exacting but, like all human endeavors, imperfect. If no one could foresee a power shortage, with prices exploding, it may have been that they simply believed that, if prices rose, consumers would get the price signal and cut their usage; investors would rush to build plants, and the crisis would pass. No one realized that electricity was a uniquely essential service. The public had no intention of quietly submitting to its short supply or spiking price.[78] To the consuming public, a price signal was a signal to scream—not a signal to adjust.[79]

At any rate, in due course, the Blue Book went to the legislature and emerged as A.B. 1890.[80] One of its key provisions reduced retail rates by 10% and then froze them at that level.[81] This provision, which was later the subject of a great deal of criticism by deregulation purists, was apparently a simple concession to the very numerous residential class to win its support for the deregulation

77. *See* Hogan, *supra* note 72, at 6 (discussing evolution of the CPUC staff report form the "Yellow Book" to the "Blue Book," which in turn provided the basis for AB 1890, discussed in this section). R

78. The vicissitudes of California in its crisis led even industry experts to ruminate that electricity was, in fact, a rather unique commodity. *See, e.g.*, Harvard Electricity Policy Group, *Moving Towards Markets in the Face of Surprises and Mistakes*, Session One, Speaker Three, at 5 (Twenty-Fourth Plenary Session, Feb. 1-2, 2001) [hereinafter HEPG February 2001] (quoting unidentified industry expert, "Markets for a basic necessity, like electricity, must produce prices that, over time, are politically acceptable. We all have to come to grips with that, because we're not talking about pork bellies.").

79. The consumer outcries in San Diego were particularly vociferous. *See* Laura M. Holson, *Why San Diego, Where Rates First Rose, No Longer Conserves Energy*, N.Y. TIMES, Jan. 30, 2001, at A20 (reporting that when the San Diego Gas and Electric company was permitted to price at a level reflecting wholesale costs, "[h]omeowners took to the streets, and businesses threatened to leave the city," causing the California legislature to once again cap retail rates).

80. A.B. 1890 was signed into law on September 23, 1996. *See* A.B. 1890, 1996 Leg. (Ca. 1996), *available at* http://www.leginfo.ca.gov/pub/95-96/bill/asm/ab_1851-1900/ab_1890_bill_960924_chaptered.html (last visited Jan. 31, 2002).

81. *See* Paul L. Joskow, *California's Electricity Crisis*, at 11 (Harvard Electricity Policy Group, Sept. 28, 2001) (noting that AB 1890 gave residential and small commercial customers "an immediate 10% price decrease from the then prevailing regulated price, financed by the cost of savings from securitization [of the stranded costs]. (So, the maximum bundled retail prices for these customers were frozen for up to four years at 10% less than the prices in effect in 1996.)").

scheme in which it otherwise would have had little interest. The opportunity to "shop" was primarily attractive to industrial customers, who were the strongest proponents of retail competition. Notably, when trouble struck in the year 2000, only about 3% of retail electricity consumers, representing 12% of total demand, had chosen to buy from a source other than the local utility.[82] Through a combination of requirements and incentives, the California utilities were induced to divest themselves of the major part of their generating plants, which were sold to unregulated generating companies. This became a huge problem to the California authorities when power ran short and they were looking desperately for generation committed to the California market.

By the same token, the utilities were required to buy their wholesale power through the California Power Exchange, which sold power on a real-time spot basis. The other central institution of the power pool was the Independent System Operator (ISO), which handled congestion management, energy balancing and like functions. The utilities were precluded from buying power through long-term contracts, such as the buy-back contracts which utilities in other parts of the country had made with the new owners of the plants they had sold. As a result of these arrangements, the California utilities had a huge commitment to deliver electric power to customers at a discount that was unhedged, leaving the utilities highly vulnerable to wholesale price increases.[83]

However, no one expected increases; the expectation was that the growing margin between the wholesale price, which would fall,[84] and the frozen retail price would help to recoup the utilities' "stranded costs."[85] "Stranded costs," as I have noted, were transition costs attributable to certain assets (like nuclear plants) that

82. *See id.* at 28.

83. *See id.* 28-29.

84. *See id.* at 10-11 ("Nobody broached the possibility that wholesale prices could possibly be higher than the regulated price of generation service reflected in prevailing retail prices."); David Frum, Editorial, *Calif. Democrats Suffer a Shortage of Brain Power*, CHI. SUN TIMES, Jan. 11, 2001, at 31 (commenting that California plan was "based on the assumption that energy prices would never go up again," which proved irresistible to customers, utility companies and politicians).

85. *See* Michael Kahn & Loretta Lynch, *Report to the Governor*, 6-8, 16-18 (Electricity Oversight Board and California Public Utilities Commission, Summer 2000), *available at* http://www.cpuc.ca.gov/word_pdf/REPORT/report.pdf; Dan Morain, *Deregulation Bill Signed by Wilson*, L.A. TIMES, Sept. 24, 1996, at A3 (noting that AB 1890 includes provisions to allow three major investor-owned utilities to recoup a large portion of $29 billion in uneconomic investments, "rang[ing] from costly nuclear power plants to uneconomical fuel contracts."); Dan Morain, *Assembly OKs Bill to Deregulate Electricity*, L.A. TIMES, Aug. 31, 1996, at A24 (describing how the

would not be competitive in the restructured configuration; compensation for these costs was very important to the utilities. (Others tended to see stranded cost compensation as "paying the utilities for their mistakes"). Once stranded costs had been fully recovered, the retail price freeze would be lifted and wholesale costs would flow through to be picked up in the retail rates.

B. Out of the Blue: Escalating Prices and Rolling Blackouts

The California restructured system was put into operation at the end of March 1998. At first, it functioned satisfactorily with only minor problems, but, in the early summer of the year 2000, things began to unravel. Prices shot up dramatically in June and stayed high right into the autumn. Wholesale prices were generally much higher than retail prices, which were frozen for the two largest utilities–Pacific Gas & Electric (PG&E) and Southern California Edison (SCE). These companies began to lose large sums of money.[86] Later, rolling blackouts were imposed on large areas of the state as a means of rationing the available wholesale electricity, which was in very short supply. High prices for power continued into the fall and winter, and the financial condition of the two largest utilities continued to deteriorate. Despite pleas for a hike in retail rates, the prices remained frozen until the spring of 2001.

However, since San Diego Gas & Electric (SDG&E) had recovered its stranded costs, its retail rates were allowed to rise in step with wholesale prices, and all San Diego felt the impact of rates jumping up by a factor of two or three.[87] The FERC held a hearing in San Diego in the fall of 2000, at which some of the commissioners of the CPUC appeared, pleading for a reversion to what they thought of as "just and reasonable" rates based on cost, as these had been calculated in an earlier and gentler era by the federal commission.[88] The local people were not prepared to accept the FERC's position that market-based rates were just and reasonable. Of course, there was considerable controversy about whether the California market was free of market power such as that derived

"competition transition charge" will be used to pay off the bulk of the utilities' investment that will not be viable in a deregulated environment).

86. *See* Joskow, *supra* note 81, at 28-30. **R**

87. *See id.* at 29-30 (describing how provisions of AB 1890 permitted San Diego Gas & Electric to pass along wholesale prices sooner than the other investor-owned utilities).

88. *See Federalism at Work*, PUB. UTIL. FORTNIGHTLY, NOV. 1, 2000, at 4, 6 (quoting excerpts of FERC field meeting in San Diego, California where a California PUC Commissioner asked for a return to cost-based ratemaking in order to achieve rates that were "just and reasonable").

through "gaming" by the generators.[89] There were accusations that perfectly healthy generating plants had been held off the market as prices peaked in order to drive prices even higher. These charges led to investigations at both the state and the federal levels, lawsuits, refund orders, and settlement efforts by the FERC. Some eminent economists thought that the charges were true even though the generating companies denied them.[90]

In the autumn of 2000, prices did not fall as expected. Natural gas prices continued to rise, and other factors remained adverse. Most important, in the winter of 2000-2001, over a quarter of the generating capacity remained off-line for illegitimate strategic reasons or for deferred maintenance[91] (depending on whose story one credited).[92] In December 2000, the peak price for wholesale electricity reached $1,400 per megawatt hour (a twenty-fold increase from the previous year), causing the utilities to expend an additional $50 to $100 million per day in order to keep the lights on throughout the state.[93]

At this time, California officials were calling urgently on the federal government to put caps on the wholesale prices that were driving the entire fiasco. President Bush took a firm free-market stance with Adam Smith, refusing to impose *any* price controls, ostensibly because these would only exacerbate the presumed

89. *See* Paul Krugman, Op-Ed, *Turning California On*, N.Y. TIMES, June 27, 2001, at A23 ("Many economists now accept the uncomfortable answer [as to why many generators were not on line during the power crunch]: Generators deliberately withheld electricity from the market in order to drive high prices even higher."); *see also* Joskow, *supra* note 81, at 23 (noting that "[a]ll of the studies that were conducted prior to the crisis found that during very high demand periods, unilateral behavior leads to prices that are significantly above competitive levels"). R

90. *See* Krugman, *supra* note 89. R

91. *See* David Lazarus, *Whistle-blowers Give Evidence of PUC that Prices Were Illegally Manipulated*, S.F. CHRON., May 19, 2001, at A1.

92. *Compare* Matt Richtel, *Ex-Workers of Generator Testify on Power Output*, N.Y. TIMES, June 23, 2001, at A7 (reporting testimony before a California state legislative committee investigating price manipulation that included allegations by three former employees of Duke Energy that the company intentionally idled generation facilities for unnecessary repairs and that "perfectly good" replacement parts were discarded in the process), *with* James Sterngold, *Power Company Rebuts Accusations of Gouging*, N.Y. TIMES, July 3, 2001, at A10.

93. Laura M. Holson, *Government Acts to Calm California's Energy Market*, N.Y. TIMES, Dec. 16, 2000, at A14 (reporting on near insolvency of California utilities and action by the FERC permitting utility companies to enter into long-term contracts in order to avoid the high market prices currently being paid on the California Power Exchange).

shortage of power plants in California.[94] He apparently thought only the correct price signal from the market could terrorize customers into cutting consumption and could induce investors to build power plants at the proper rate. However, the FERC, caught between the President and California members of Congress of both parties, gradually through the spring and into the summer of 2001 installed increasingly effective price restraints, which it called "price mitigation."[95] The California utilities continued to seek retail rate increases, but the CPUC kept refusing their requests (and by this time the legislature had also voted to impose ceilings on the rates of SDG&E). PG&E went into bankruptcy in April 2001. In May 2001, the CPUC announced that retail rate increases of about 40% would be granted to all the utilities, with virtually all the increase falling on large users of electricity.[96] There were several days of rolling blackouts in the spring, and predictions for the summer were bleak. Hundreds of hours of blackouts were forecast for California and other areas in the West—even with normal weather conditions.

A number of factors had contributed to runaway electric prices in California: the rapid growth of demand in the booming economy of the 1990s; warmer than usual temperatures; very high prices of natural gas, which was a prime fuel in California; rising prices for NOx emissions credits; lower water in the Columbia River basin available for hydroelectric generation; the exercise of market power by the generators in withholding the output of power plants; and a temporary shortage of power plants due to a failure to build generation in the years immediately preceding the crisis.[97]

During the Clinton Administration, the Department of Energy had issued orders, which were enforced in court, requiring generators (who were worried about collecting their bills) to continue supplying the California market. But the Bush Administration, which took over in January 2001, announced that it would shortly discon-

94. *See* Joseph Kahn, *Administration Leaves Power Crisis in California's Hands*, N.Y. TIMES, Jan. 23, 2001, at C4 .

95. *See* David E. Sanger, *The Lesson of When to Give Aid to Free Markets,* N.Y. TIMES, June 20, 2001, at A14 (describing the FERC's "price mitigation" policy and its tepid endorsement by Bush administration officials).

96. *See California Panel Spells Out Rise in Rates for Electricity*, N.Y. TIMES, May 16, 2001, at A24 (reporting new rate structure designed to levy largest rate hikes on large residential users while low-income and low-use households will have an average increase of zero percent).

97. *See* Joskow, *supra* note 81, at 30-33. R

tinue the DOE orders.[98] This galvanized the State of California into action.

C. California Rides to the Rescue

S. David Freeman, who was general manager of the Los Angeles Department of Water and Power, the largest municipal power utility in the country, was named Energy Advisor to Governor Davis. By now, the ban on long-term contracts had been rescinded by the FERC and by the California legislature,[99] and Freeman set to work negotiating long-term electric supply contracts on behalf of the state. This arrangement, under which the state general fund provided the needed cash, was necessary because the utilities were no longer creditworthy. In fact, they were broke.[100] The intention was to reimburse the state's general fund from a bond issue to be secured by future electric revenues. The bonds, however, have never been issued because the CPUC declined to approve an agreement with another state agency guaranteeing sufficient electric revenues in the future to fund the bonds.[101] How the obligation to finance the power purchases made by the State will ultimately be handled remains unclear. The contracts helped in a major way to relieve California from the agonies connected with spiking spot prices and acute shortages, but there is concern that the contract prices may turn out to be higher than market prices for a number of years. Under the circumstances, however, there may not have been any other way to proceed. Currently, efforts are being undertaken to renegotiate some of the contracts at lower prices. It's always nice to have it both ways!

98. *See* Joseph Kahn, *Bush Adds 2 Weeks to Orders Ensuring California Power*, N.Y. TIMES, Jan. 24, 2001, at A1.

99. This provision, known as the "mandatory buy-sell," was repealed in early 2001. *See* 2001 Cal. Legis. Serv. Ch. 4, § 1 (West) (repealing the bar on multiple qualified exchanges that had been codified as Cal. Pub. Util. § 355.1). However, a FERC decision rendered a few weeks earlier had essentially achieved the same effect. *See* San Diego Gas & Elec. Co. v. Sellers of Energy and Ancillary Serv. Into Markets Operated by the Cal. Indep. Sys. Operator and the Cal. Power Exchange, 93 F.E.R.C. ¶ 61,238 (Dec. 8, 2000).

100. *See* A.B.A. SECTION OF PUBLIC UTILITY, COMMUNICATIONS AND TRANSPORTATION LAW, FALL 2001 REPORT OF THE ELECTRICITY COMMITTEE 9 (2001) [hereinafter FALL '01 ELECTRICITY REPORT].

101. In October 2001, the CPUC rejected an agreement with another state agency providing for future rates and revenues adequate to fund bonds to be sold to repay the state for advances. *See* James Sterngold, *Panel Rejects Electricity Plan Favored by California Leader*, N.Y. TIMES, Oct. 3, 2001, at A14.

California also proposed to buy the transmission systems belonging to the investor-owned utilities.[102] This would provide funds for the cash-strapped utilities and presumably make the state responsible for maintaining and improving the state's transmission system. This plan was carried out with respect to Southern California Edison, but Pacific Gas and Electric's bankruptcy precluded it from participating.[103] There was, in addition, a plan—never implemented—for the state to buy the hydroelectric plants belonging to the utilities.[104] Later, the State of California created a California Conservation and Power Development Authority to purchase or finance utility facilities, which was authorized to issue up to $5 billion in bonds.[105] This would put the state into the electricity business in a big way.

D. A Happy Ending

Surprisingly, and defying all predictions, in June 2001 electricity prices in California began to decline. They fell during the rest of the summer and, dramatically, on into the autumn. Why did this happen? Of course, the summer was not as warm as feared; natural gas prices began to fall;[106] and, most importantly, the combination of regulatory measures to which I have adverted—state and federal—began to take effect. The FERC had placed fairly effective caps on wholesale prices. The long-term contracts were having their anticipated effect and were removing the incentives for gam-

102. Laura M. Holson, *Deal Struck With Utility, California Governor Says,* N.Y. TIMES, Apr. 10, 2001, at A12 (discussing deal with Southern California Edison). Both Southern California Edison and San Diego Gas and Electric have signed Memorandums of Understanding in which the state has agreed to purchase the transmission assets of both utilities for a multiple of their book values. *See also* FALL '01 ELECTRICITY REPORT, *supra* note 100, at 9 (stating that the California Conservation and Power Development Authority was also "authorized to issue . . . bonds for the purchase or financing of power plants, transmission and distribution lines and other utility assets"). R

103. *See* V. Dion Haynes, *California Reaches Deal to Aid Utility,* CHI. TRIB., Apr. 10, 2001, § 1, at 11 (reporting on Southern California Edison deal and noting that bankruptcy filing blocked "Davis' attempts to purchase Pacific Gas and Electric's power grid to help finance the bailout").

104. *See* Vincent J. Schodolski, *California Floats Plan to Buy Some Power Plants*, CHI. TRIB., Jan. 24, 2001, § 1, at 1 (reporting legislative proposal to buy hydroelectric facilities of Pacific Gas & Electric and Southern California Edison in order to provide them with much needed cash).

105. *See* FALL '01 ELECTRICITY REPORT, *supra* note 100, at 9. R

106. Natural gas is an important fuel for generating electricity, particularly in California. *See* Joskow, *supra* note 81, at 16 (noting that 40% of California's in-state generation relies on natural gas). R

ing. Regulatory scrutiny of plant outages was reducing any tendency of generators to keep their plants off line, and strikingly reduced outage rates were beginning to be reported. The FERC had also ordered plants capable of generating power to bid their power into the California pool.[107]

However, the most sensational factor in the return of California to electric sufficiency was conservation. The decline in electric usage, year to year, exceeded ten per cent, which is a huge drop.[108] There was, of course, a campaign of exhortation by the governor and by all sorts of lesser personages. State (and federal) buildings enforced stringent conservation codes. The retail rate increases that were granted fell disproportionately on the larger users, discouraging growth in consumption. Twenty per cent rate rebates were offered to residential and small commercial users who reduced their usage by twenty per cent; one-third of eligible consumers qualified for the rebate.[109] Best of all, Californians displayed real enthusiasm for conservation, and the results were striking and undeniable.[110]

E. Learning from California

In September 2001, the CPUC terminated the retail competition program that was at the heart of the deregulation effort, thus bringing to a close California's dalliance with restructuring.[111] A few months later, Enron, called by many the flagship of deregulation, encountered severe financial trouble and entered bankruptcy. At this writing, nothing specific has surfaced to tie Enron's collapse directly to electricity deregulation as practiced in California. However, Enron's demise did make some sort of statement about the culture of a "new" firm growing out of deregulation as contrasted

107. *See* Jeff Gerth, *U.S. Agency Widens Its Curbs on Price of Power in West*, N.Y. TIMES, June 19, 2001, at A1 (discussing an April order by FERC that required generators to supply all of their available electricity, and made the withholding of power subject to possible penalties).

108. *See* FALL '01 ELECTRICITY REPORT, *supra* note 100, at 4 & n. 18. R

109. *See* Edie Lau, *3 Million Due Power Rebate*, SACRAMENTO BEE, Aug. 3, 2001, at A1 (reporting rebates to millions of customers for reducing electric consumption by more than twenty percent from the same month one year earlier).

110. *See, e.g*, *The California Crisis*, ELEC. UTIL. WK., July 16, 2001, at 5 (reporting survey by J.D. Power and Associates in which eighty-three percent of Californians were conserving electricity in order to reduce threat of rolling blackouts).

111. *See* Joskow, *supra* note 81, at 4 ("In September 2001, the California Public Utilities Commission finally terminated the retail competition program that was the primary motivation for the restructuring and deregulation program initiated in the mid-1990s."). R

with an old-fashioned regulated company. Enron was entrepreneurial and innovative in developing its expertise in trading energy products, like megawatt-hours of electric energy or volumes of natural gas—futures and options—but it never came to develop a culture of commitment to serving the public, like more traditional energy companies.

A useful contrast is provided, perhaps surprisingly, by the example of Consolidated Edison—an old-fashioned urban utility that won praise and even popularity for its commitment to putting the electric system back together after the events of September 11.[112] I think that one must bear these contrasts in culture in mind when evaluating how things are likely to work, regulated or deregulated. One can value an innovative culture, but not at the expense of losing corporate probity and commitment to serving the public.

So what are the lessons of the crisis in California, the collapse of Enron, and other recent events in the ongoing saga of regulation and deregulation? One interesting aspect and example of unintended consequences of the California crisis was the lift that it gave to public power. The Los Angeles Department of Water and Power had opted out of deregulation (which was its right under the law), and it sailed smoothly through the California storm with hardly a tremor.[113] In fact, throughout the crisis it sold power to the deregulated power pool at very advantageous, if not embarrassingly inflated, prices.[114] At the same time, in San Francisco, a movement got underway to break the city loose from PG&E and to acquire its distribution system for the city. A ballot proposition to create a municipal utility failed by a minuscule margin in the November 2001 election.[115] This effort may be resumed at the next electoral oppor-

112. *See* Neela Banerjee, *In Tumultuous Year, Con Ed Basks in Its Quiet Success,* N.Y. TIMES, Dec. 26, 2001, at C1 (reporting that "[p]oliticians and regular New Yorkers applauded the utility for dispatching legions of workers to restore power to the wounded financial district in time for the reopening of the New York Stock Exchange less than a week after the attacks").

113. *See* Barbara Whitaker, *Los Angeles Gains Attention and Money With Its Own Power*, N.Y. TIMES, Dec. 22, 2000, at A16 (reporting that agency had lower costs and a surplus of power during California crisis, thus prompting interest in municipal power in several other California cities).

114. *Id.*

115. *See San Francisco Voters Defeat Two Measures About Energy*, N.Y. TIMES, Nov. 13, 2001, at A14 (reporting on the failure of Proposition F by a margin of 49.8 to 50.2 percent); Evelyn Nieves, *San Francisco Is Considering Its Own Utility*, N.Y. TIMES, Jan. 19, 2001, at A22 (reporting that reliability and success of public power in Los Angeles and Sacramento fueled popular sentiment for municipal system in San Francisco, thus prompting placement of ballot issue on the November 2001 ballot).

tunity. In addition, the state of California itself got into the power business in a big way through the activities of David Freeman (in contracting for power for the state), through the purchase of the Southern California Edison transmission system, the setting up of a well-funded state agency to buy and finance utility facilities, and in other ways.

Among the questions that grow out of California's unhappy experience, there are two that seem most significant. What mistakes led to the disaster and what impact will the debacle have on, first, the future of electricity deregulation and, second, existing and prospective deregulation of other services? The two "mistakes" for which the California experiment has been most criticized are (1) its failure to deregulate retail rates so they could remain in sync with wholesale prices, and, (2) the failure, because of environmental requirements, to build enough generating capacity in the late 1990s to meet expanding demand.

As to the first mistake, disparity between wholesale and retail pricing, there can be little doubt that the economic benefit of providing accurate price signals to consumers is substantial and would support retail prices that track wholesale costs. This, however, is only part of the story. Before the question of rates tracking costs is even presented, the entire scheme of deregulation must appear sufficiently attractive to win public approval. Specifically, the class of very numerous residential customers must be persuaded that deregulation is good for their pocketbook or has other virtues sufficient to lead them to depart from the status quo. For the residential customers, unlike big industrial users, the privilege of "shopping" for power has little meaning. But rates that are frozen at a reduced level are the kind of inducement that ordinary electricity customers understand and find attractive. And this was the inducement that the deregulation sponsors offered to win votes in the legislature. State Senator Peace of San Diego was one of the leaders in that effort in the mistaken belief that deregulation was a reliable road to lower prices.[116] He later recanted in anguish when spikes in electric bills began to severely roil his constituents.[117]

Although philosophically far afield from competition, frozen rates are a way to engender the support of consumers. And, ironically, the designers of the California scheme were so convinced that competition would drive wholesale prices down rather than up that

116. *See* Alex Berenson, *A Spike in Electricity Prices Sets Off Debate in California*, N.Y. TIMES, July 29, 2000, at A7 (reporting that Peace "helped write the deregulation legislation but is now calling for some government controls on prices").

117. *See id.*

the advocates believed freezing them at retail would provide a margin for the supplier, not for the consumer.[118] In fact, the deregulation plan provided that the retail rate freeze would continue only until the incumbent utilities had recovered their "stranded costs." The customers of San Diego Gas & Electric were the first to feel the impact of fully deregulated prices because the San Diego utility was the first to recover its "stranded costs."

As things turned out, of course, wholesale prices rose rather than declined. And economists can argue that rising retail rates would have provided a price signal to consumers to reduce their usage.[119] It is very doubtful, however, that the bulk of users would have regarded these price spikes as legitimate, and, if "gaming" were in the picture, public suspicion would have been quite justified. It is always a mistake to view the price of electricity in a political vacuum. Electricity is a politically sensitive service, and how people feel about it is quite as important as economic theory in designing a workable electric power system. In all fairness, however, I might note one circumstance that argues that the California deregulators might have included retail rates in the deregulation scheme from the start. For in New York's deregulation, retail rates were not frozen and, in fact, crept upward with a rising wholesale price structure.[120] I have not been able to explore why New York's approach could apparently be different than California's in this regard.

As for the second highly publicized mistake, the alleged failure of the utilities to build new power plants for as much as thirteen years before the onset of the crisis, economist Paul Joskow has debunked the notion that additional capacity was the victim of negligence or an environmental blockade.[121] His analysis seems to exculpate both environmentalists and utilities from major blame for the capacity shortages that showed up. According to Joskow, in the early 1990s there was a considerable surplus of generating ca-

118. *See supra* note 85 and accompanying text. R

119. *See, e.g.,* Joskow, *supra* note 81, at 51 (observing that deregulation cannot work if "consumers are completely insulated by regulation from the wholesale prices"); William Safire, *California Power Failure*, N.Y. TIMES, Jan. 11, 2001, at A31 ("California's politicians deregulated halfway, which is the worst way: wholesale prices were freed from controls, but retail prices were not."). R

120. *See* Neela Banerjee & Richard Pérez-Peña, *A Failed Energy Plan Catches Up to New York*, N.Y. TIMES, June 1, 2001, at A1 (reporting that deregulation in New York has led to incidents of higher prices and price gouging, though noting that state is responding to the flaws in the deregulated electric systems and that consumers may eventually benefit from lower prices over the long-term).

121. *See* Joskow, supra note 81, at 24-25. R

pacity in California[122] and, during the time of transition (1994-1998), no one had an obligation to provide capacity. In that period, economic incentives to furnish it were clouded by uncertainty about what the ultimate arrangements for electric service would be. Of course, under the completed scheme of deregulation, legal obligation (the duty to serve) was no longer to play a part in the provision of electric capacity; adequate capacity was to be a function of economic incentives emerging from the market. If there was money to be made by selling electricity, there would be an incentive to build capacity to produce it. Demand would stimulate supply.

Whether the market in the future can prove to be an adequate regulator of electrical supply remains to be seen. In the long run and as a matter of economic theory, market incentives might be capable of getting the job done, but I would be more concerned about whether this arrangement would deal adequately with short-term shortages and surpluses. In this context, of course, the "short run" could involve years, and "temporary" imbalances would invite regulatory interventions, as they did most forcefully in California. President Bush opposed regulatory interventions because he saw them as a damper on investment in capacity.[123] No doubt there is some merit to his position, since there is an old saying that an industry cannot survive "half slave and half free"—that is, half regulated and half released to competitive forces.[124] But, as in California, there are severe limitations to the loss in reliability and to the perturbations in price that the public will accept in the case of electric power.

How about electricity surpluses (and these are now being forecast)?[125] Surpluses may be tolerated, indeed welcomed, for a time,

122. *See id.* at 25 (noting that "[t]he excess capacity situation that existed when the discussions of restructuring began in 1993 was expected to last for another [ ] decade").

123. *See* Kahn, *supra* note 94, at C4. R

124. *See* Robert R. Nordhaus, *Yardstick Competition in a Deregulated Electric Industry*, 12 NAT. RES. & ENV'T 256, 258 (Spring 1998) (using the expression to describe the emergence of a partially regulated electric industry); *cf.* HEPG February 2001, *supra* note 78, Session Three, Speaker One, at 4 ("I think we need to set as a R goal a period of time in which all customers will eventually go into the competitive market, as they have in England. I don't think you can have a system that's half competitive and half regulated. It's unstable.").

125. *See* Harlan S. Byrne, *Too Much Power?*, BARRON'S, Aug. 6, 2001, at 21 (reporting opinions of some industrial analysts who believe that the electric industry may soon be headed for a power glut, "with potentially ugly consequences for firms that are forced to carry unused generating capacity"); Kirk Johnson, *Electricity Crisis Eases in New York: As Sept. 11 Reduces Demand, Rush to Build Plant Wanes*, N.Y. TIMES, Feb. 5, 2002, at A1 (reporting on power surplus in New York, due in part to the

but, if the surplus became a threat to the survival of the generators and, hence, to reliability in the long run, I suspect that interventions of some kind in the market would be inevitable. I see these prospects as distinct limitations on exclusive reliance on the market. Rejection of the market as the sole determinant of capacity is even more likely if market manipulations are possible, in fact likely, and difficult to detect and suppress.

CONCLUSION

In general, I am inclined to believe that regulatory interventions of some frequency and force may be characteristic of a deregulatory regime in electric power. That may be the key lesson of the California experience. It is not easy to control electric supply systems, and I doubt that there will be any more patience than there was in California to await the tidal swings of the market to bring things back into equilibrium when they have taken a turn unsatisfactory to the public and to the government in its behalf. Unlike airline regulation, for example, where extensive experience has disclosed no evident barriers to the effectiveness of the market in allocating resources, competition in electric power is an untested insurer of reliability and price stability. Also we do not even know whether the losses in coordination from disaggregating generation and transmission will more than offset the presumed gains from competition. In addition, choice of fuel, often dictated by environmental factors and not in the sole control of the builder, may play a major role in determining the cost and competitiveness of proposed plants.[126] Thus, as I have noted, the predicted benefits of deregulation have been so expansively portrayed by its advocates that actual experience may prove disappointing.

The public has been promised two benefits from electric deregulation—choice of supplier and lower prices from competition. Based on the California experience, choice *per se* is apparently not meaningful to the average customer except as it might necessarily bring prices down. Remember that in California only 3% of electric customers chose to buy from a source other than the local util-

loss of the World Trade Center, the recession, and noting that approximately "50 percent of the power plants that have been proposed across the country in the last few years will probably not be built," according to industry experts).

126. *See* Richard D. Cudahy, *The Choice of Fuel in Competitive Generation,* PUB. UTIL. FORTNIGHTLY, June 15, 1995, at 31-35 (noting that prevailing wisdom on the future availability of fuels has been unreliable, and, for example, that past predictions on the promise of nuclear power and the scarcity of natural gas have proven to be unfounded).

ity.[127] Choice is of interest primarily to big industry. And California has exploded the myth that competition inevitably yields lower prices. On the other hand, consumers might conclude that regulatory interventions worked in California when markets failed. There could be a real problem in winning consistent public support for deregulation in electricity. It may be that price signals are simply not a quick enough or sure enough means of controlling the electricity delivery system to satisfy the public demand for reliability and price stability.

As much as anything else, deregulation of electric power has been a product of ideological commitment—dedication to the belief that, whatever the economic problem, free markets are the solution—and monopoly is, no matter what the circumstances, bad. These propositions, and their appeal to the right, the left, and the center of the political spectrum, are what has lent such power to the deregulation movement and what promises to sustain it even in the face of the California disaster.

It is here that Enron enters the calculus. For Enron as a company stood for the power of competitive innovation, and the creativity associated with it, to forge a new and more productive way of dealing with energy. Enron failed apparently because of its hubris—its apparent belief that it could make its own way in the energy world, freed of deference to traditional rules and unshackled from regulatory constraint. Its demise may send a message that competitive innovation is not the only value—that freedom from regulation can loose the demons of human nature as well as unbind its creative potentials.

So, as I have suggested, the California experience may significantly slow the onward march of electricity deregulation in other parts of the country. And, considered in connection with the Enron collapse, deregulation in general may no longer bear the special cachet that has favored it in the past.

127. *See supra* text accompanying note 82. **R**