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Comment: Were California's Electricity Price Shocks Nothing More Than a New Form of Stranded Costs?

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Comment: Were California's Electricity Price Shocks Nothing More Than
a New Form of Stranded Costs?

WERE CALIFORNIA'S ELECTRICITY PRICE SHOCKS NOTHING MORE THAN A NEW FORM OF STRANDED COSTS?

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* Note and Comment Editor, *American University Law Review* Volume 52; J.D. Candidate May 2003, *American University Washington College of Law*; B.A., 1998, *University of California, San Diego*. I would like to thank Professor Jonathan Baker for his invaluable guidance through the early stages of this Comment and the Volume 51 and Volume 52 *Law Review* staff for their assistance. I would also like to thank my loving husband David, without whom I would not have crossed the finish line and could not face a single day. Also, I am grateful to my friends and family for blessing me many times over. Finally, I would like to dedicate this Comment to Constance A. McKenzie Cornhill who forever changed me, and for whom my heart cries.

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INTRODUCTION

In the first half of 2001, California experienced a 3800% increase in the number of stage three emergencies¹ and blackouts from the previous year.² For Marvin Miller, a California resident whose eighty-three-year-old wife depends on her electric ventilator, these emergencies were not mere inconveniences; these blackouts created life-threatening circumstances.³ Residents who rely on electrically operated life-support had to create emergency plans involving generators, extra oxygen tanks, and relocating to the nearest hospital.⁴ The blackouts left many senior citizens and medical facilities without power, creating possibly fatal circumstances.⁵

The rolling, or rotating, blackouts were a direct result of California's 1996 deregulation experiment,⁶ combined with the physical limitations of California's electricity system.⁷ In 1996, the

1. See ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, SUBSEQUENT EVENTS: CALIFORNIA'S ENERGY CRISIS, at <http://www.eia.doe.gov/cneaf/electricity/california/subsequentevents.html> (defining stage three emergencies as instances where the Department of Energy forecasts that the amount of electricity in reserve will be less than 1.5% of the total system capacity while all available resources are dispatched) (last modified Aug. 8, 2002) (on file with author).

2. See *id.* (indicating that the number of stage three emergencies rose from one incident in 2000 to thirty-eight by May 22, 2001, thus increasing the number of rotating blackouts). Rotating blackouts are involuntary interruptions in electricity usage, which in some instances are the inevitable result of stage three emergencies. *Id.*

3. Margaret Talev, *At-Risk Patients Plan Ahead for Rolling Blackouts Power*, L.A. TIMES, Mar. 21, 2001, at B1.

4. See Bob Pool, *Power for Survival Health: Thousands of Southland Patients are Kept Alive by Electrically Operated Machines in Their Homes*, L.A. TIMES, Jan. 26, 2001, at B1 (describing many residents' surprise after learning they might be affected by the power shortages despite their medical conditions and that even hospitals were not guaranteed uninterrupted service).

5. *Id.*

6. See Electric Utility Industry Restructuring Act, AB. 1890, 1996 Cal. Assem. Reg. Sess. (Cal. 1996) [hereinafter AB 1890] (deregulating part of the vertical electricity industry in California by allowing wholesale merchants of electricity to compete on a free and open market while requiring wholesale buyers, or retail sellers, to stay in a quasi-regulated state).

7. See Paul L. Joskow, *Deregulation and Regulatory Reform in the U.S. Electric Power Sector*, in DEREGULATION OF NETWORK INDUSTRIES: WHAT'S NEXT? 113, 115 (Sam Peltzman & Clifford Winston eds., 2000) (explaining that a physically healthy electricity network easily transmits electricity to lower-producing regions without disrupting the constant flow of power, while evenly diffusing demand and reserve spikes and lulls). In 1996, California's electricity system was weak and was not properly servicing demand or maintaining sufficient electricity reserves; this was attributable to both wholesalers' lack of motivation to cut costs—thereby decreasing prices—and to the industry's function as a natural monopoly. See Course Handout,

California legislature passed California Assembly Bill 1890 ("AB 1890"),⁸ which ensured that California's electricity industry complied with the latest regulations⁹ issued by the Federal Energy Regulation Commission ("FERC").¹⁰ In accordance with legislative mandates, the California Public Utilities Commission ("CPUC") issued orders carrying out AB 1890 and FERC orders.¹¹

Jonathan B. Baker & Michael O. Wise, American University, Washington College of Law, Utility Rate Design: Economic Principles for Regulatory Law & Policy (Fall 2001) (explaining the mechanisms of pricing where firms exist in natural monopolies and in free competition) (on file with author); WILLIAM W. SHARKEY, *THE THEORY OF NATURAL MONOPOLY* 54 (1982) (explaining that a natural monopoly exists where a single firm can produce its product more efficiently than any combination of two or more firms). In many cities or regions of California, the electricity industry was a natural monopoly because the utilities owned the generating plants, the transmission lines, and the distribution systems. *See generally* Deirdre O'Callaghan & Steve Greenwald, *PURPA from Coast to Coast: America's Great Electricity Experiment*, 10 NAT. RESOURCES & ENV'T 17, 20 (1996) (describing California's electricity industry as a "model" natural monopoly).

8. AB 1890, *supra* note 6. The electricity industry and its regulators refer to this act by its bill number rather than the public law number or statute. In accordance with industry practice, this Comment will refer to this act by its bill number, AB 1890.

9. *See, e.g.*, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 61 Fed. Reg. 21,540, 21,629 (Apr. 24, 1996) (codified at 18 C.F.R. pts. 35 & 385) [hereinafter Order 888] (requiring wholesale generators of electricity to open their market to competition and to share their transmission lines with other firms). *See generally* DANIEL YERGIN & JOSEPH STANISLAW, *THE COMMANDING HEIGHTS: THE BATTLE BETWEEN GOVERNMENT AND THE MARKETPLACE THAT IS REMAKING THE MODERN WORLD* 349-52 (1998) (discussing the historical development of and rationale behind regulatory policy in the United States that ultimately led to the Federal Energy Regulation Commission (FERC)'s Order 888 and the sweeping movement to deregulate the electricity industry).

10. *See* Federal Power Act, 16 U.S.C. §§ 824a-824m (1994) (establishing FERC and delegating to it the power to regulate the electricity industry where inter- and intrastate transmission and interstate commerce are involved). Although FERC's jurisdiction is federal, its involvement in state electricity regulation issues is, at times, labeled as infringing on states' autonomy; conversely, FERC is often criticized for not directly solving states' energy crises. *Compare* Fed. Power Comm'n v. S. Cal. Edison Co., 376 U.S. 205, 208 (1964) (holding that sales between California firms constitute interstate commerce and fall under federal jurisdiction), *and* Fed. Power Comm'n v. Fla. Power & Light Co., 404 U.S. 453, 461 (1972) (finding that electricity entering the state's transmission grid, which was connected to out-of-state lines, was part of interstate commerce and subject to federal jurisdiction), *with* CAL. PUB. UTIL. COMM'N, ANALYSIS OF FERC ORDER AND STAFF REPORT 3 (2000) [hereinafter CPUC STAFF REPORT] (discussing the errors in FERC's analysis and problem solving of the California electricity crisis, and implicitly stating FERC's responsibility to solve California's woes properly), *available at* <http://www.cpuc.ca.gov/published/report/3587.htm>. *See generally* Public Utilities Act of 1951, CAL. PUB. UTIL. CODE § 202 (West 1957) (establishing the local regulatory body's jurisdiction over intrastate and interstate utility rates).

11. *See* CAL. PUB. UTIL. CODE § 301 (establishing the Commission as the state's public utility regulatory body with the power to regulate rates); *see also* Jonathan Steer et al., *Public Utilities Commission*, 16 CAL. REG. L. REP. 139, 139 (1999) (stating that the CPUC was created in 1911 to secure reasonable public utility rates for consumers and to regulate the private utilities). Throughout CPUC's most recent regulatory process, the Governor of California voiced his concern for consumer rights and

These CPUC orders substantially affected California's wholesale generators, transmission networks, retail distributors,¹² consumers, and also created the foundation for an unbalanced market.¹³ Before deregulation, the electricity companies were vertically integrated within their respective territorial markets; that is, the companies owned firms throughout the electricity production and delivery process.¹⁴ Even post-deregulation, these integrated firms may have remained natural monopolies,¹⁵ thus maintaining their insulation from new competition.¹⁶

submitted multiple plans to the CPUC that minimized costs to his constituents. *See* Presentation from Governor Gray Davis, on the State of California: Meeting the Energy Challenge, to the California Public Utilities Commission (Apr. 5, 2001) (offering an alternative rate plan to increase supply and protect consumers from extreme prices), available at <http://www.cpuc.ca.gov/published/report/6573.htm>. The Governor's suggestions were barely considered, as evidenced by their exclusion from CPUC order language, and consumers were exposed to the CPUC's disappointing orders. *See* CAL. PUB. UTIL. COMM'n, GOVERNOR'S RATE DESIGN PRESENTATION WORKSHOP (Apr. 12, 2001), at <http://www.cpuc.ca.gov/published/report/6364.htm> (providing a list of questions posed by workshop attendees on the effectiveness of the Governor's plan) (on file with author). *See generally* Steer, *supra*, at 140-41 (discussing the difficulties that the CPUC and the electricity industry have had since deregulation and describing the efforts to resolve the problems within the industry).

12. *See* MARC ALLEN FISHER ET AL., CONTEMPORARY REGULATORY POLICY 246-47 (2000) (observing that in the United States there are about 260 private utility companies, compared to 3000 public utility companies, and that, although private utilities account for most of the electricity produced, CPUC orders affected public and private companies alike). The public, or consumer-owned, utilities have been exempted from numerous FERC and CPUC orders dictating retail rates; most public utilities have been allowed to maintain and continue to enter into long-term contracts with wholesalers, thus theoretically ensuring lower rates for their constituents. *See* Order 888, *supra* note 9, at 21,629 (noting that municipal utilities that entered into wholesale sales contracts should be allowed to recover stranded costs—those costs that utilities encounter when ensuring that their facilities and procedures comply with newly developed regulations).

13. *See generally* Joskow, *supra* note 7, at 118 (illustrating the four-part structure of the electricity market and assessing the costs and benefits of electricity sector restructuring throughout the United States). *See also* Direct Testimony of Robert P. McCullough, FERC Docket No. EL02-28, at pp. 8-10 (filed June 28, 2002) (illustrating the volatility and illiquidity in the wholesale electricity market in the 2000-2001 time frame).

14. Deborah Raggio Bolton, *Restructuring of the Electric Utility Industry: Address Before the Practicing Law Institute Conference on Utility Restructuring: Negotiating, Structuring and Documenting the Deal*, in UTILITY RESTRUCTURING: NEGOTIATING STRUCTURING & DOCUMENTING THE DEAL 306 (2001); *see* PAUL L. JOSKOW & RICHARD SCHMALENSEE, MARKETS FOR POWER: AN ANALYSIS OF ELECTRICAL UTILITY DEREGULATION 113 (1983) (defining vertical integration and stating that vertically integrated companies tend to corral business within their own organizations).

15. *See* SHARKEY, *supra* note 7, at 54 (describing a natural monopoly as an instance where one firm can make a product for a lower cost than two or more other firms, and noting that this can be mathematically tested).

16. Where there is a natural monopoly, even if the market is deregulated, any new firms that enter the market will not increase the social benefit because they will not be able to produce the product for a lower price than the first firm. *Id.* at 56; *see* HERBERT HOVENKAMP, ECONOMICS AND FEDERAL ANTITRUST LAW 31-36 (1985).

Deregulation required vertically integrated firms to unbundle their services by functionally separating their generating capabilities, purchasing wholesale electricity from “qualified” firms, and allowing other firms fee-based access to their transmission lines.¹⁷ Theoretically, this unbundling would give consumers the ability to choose their electricity providers, and thus lower retail rates through competitive pricing mechanisms.¹⁸ However, this plan faced challenges from the beginning, because regulators continued to regulate retail rates indirectly by implementing price caps and by forbidding distribution companies, or non-public utilities, from entering into long-term contracts with generating firms, while continuing to allow public utilities to enter into such contracts.¹⁹ By forbidding these contracts, regulators ultimately failed to serve the best interest of the public because in the end, the distributing companies could neither secure adequate supplies nor, in reality, afford to purchase what limited supply existed.²⁰

California’s new electricity market structure may have contributed to wholesale firms exercising market power²¹ and possibly colluding with power marketers, through various techniques such as withholding capacity and engaging in “wash”²² transactions, to

(explaining that, even where there are no physical market barriers to marketplace entry, the extraordinary expenses of entry would force retail prices up and defeat the purpose of competitive pricing).

17. Order 888, *supra* note 9, at 21,629; *see* Bolton, *supra* note 14, at 314 (illustrating the new market structure after electricity firms were disassembled into their functioning parts).

18. *See* Order 888, *supra* note 9, at 21,565-66 (noting that, by requiring previously bundled utilities to provide open access to their transmission lines, this eventually reduces the end costs for customers and prevents undue discrimination by allowing competing firms to reach end consumers through previously unavailable transmission lines).

19. *See* Re Proposed Policies Governing Restructuring of California’s Electric Services, 151 Pub. Util. Rep. (PUR) 4th 73 (Cal. Pub. Util. Comm’n 1994) (discussing the difficulties that utilities have faced both financially and logistically with long-term contracts and suggesting that by disallowing these contracts many such difficulties will be remedied); Alternative Regulatory Frameworks for Local Exchange Carriers, 107 Pub. Util. Rep. (PUR) 4th 1 (Cal. Pub. Util. Comm’n 1989) (offering new methods of regulating the electricity utilities through price caps that would allow companies freedom of pricing to a limited extent).

20. *See* Mitchel Benson, *Some Executives are Sour on the Governor’s Handling of Electricity Woes*, WALL ST. J. at A2 (Apr. 24, 2001) (documenting the financial troubles of some of California’s largest utilities).

21. *See* LAWRENCE ANTHONY SULLIVAN, HANDBOOK OF THE LAW OF ANTITRUST 30 (1977) (defining market power as “the power of a firm to affect the price which will prevail on the market in which the firm trades”).

22. *See* Memorandum from R. Sanders to C. Yoder & S. Hall, Enron Corp. (Dec. 6, 2000) (filed in Staff Fact-Finding Investigation of Western Markets, FERC Docket No. PA02-2, May 2002) [hereinafter “Enron Memo”] (describing many such transactions where power marketers were able to create the appearance of a dispatch/delivery transaction to the California markets, but in reality there was no

maintain and inflate wholesale prices.²³ Moreover, demand was relatively inelastic, or not very responsive to price, thus permitting the firms to obtain higher and higher prices through collusion.²⁴ This demand inelasticity meant that the smallest reductions in supply led to substantial increases in price, such as the retail price spikes of 2000-2001.²⁵ In the fall of 1999, supply began falling due to natural and environmental reasons—such as exaggerated weather conditions, firms withholding supplies, a high rate of plant maintenance work, and a complete depletion of NO_x or emissions credits,²⁶ thereby preventing many gas-powered plants from relieving the electricity

delivery because the apparent need, or congestion, was manufactured).

23. See CPUC STAFF REPORT, *supra* note 10, at 11 (stating CPUC's finding that market power was exercised "to a very substantial degree"); Enron Memo, *supra* note 22, at 1-3 (describing Enron's market manipulation techniques, such as creating false congestion). The market was organized such that the wholesale firms had a strong incentive to collude to keep wholesale prices from falling. *Id.* at 12; see ERNEST GELLHORN, ANTI-TRUST LAW AND ECONOMICS IN A NUTSHELL 58 (4th ed. 1994) (discussing the proper functions of a fully competitive market and the dangers of a monopolistic market). In a competitive market, prices often either get driven so low that eventually one of the firms is run out of business, or firms tacitly agree to maintain prices at a certain level to insure profits and investment returns. *Id.* at 1.

24. See STEVEN L. PULLER, PRICING AND FIRM CONDUCT IN CALIFORNIA'S DEREGULATED ELECTRICITY MARKET 6-9 (Univ. of California Energy Inst. POWER Program Working Paper No. 080, 2002) (explaining that the California market was a powerful hybrid model which capitalized on inelastic demand and non-existent real-time pricing in order to exercise market power); John Buritt McArthur, *The Inreconcilable Differences Between FERC's Natural Gas and Electricity Stranded Costs*, 46 BUFF. L. REV. 71, 80 n.21 (1998) (noting that the nature of the industry, with so few firms to choose from, lends itself to less elastic demand than ordinary markets and further, that the distinctly inelastic supply-cost curve affects the gas and electricity industries similarly). Inelastic demand creates a rigid market that is unable to absorb any kind of market disruptions, such as the deregulation of California's electricity industry, any exercise of market power, or abrupt rate spikes. SCOTT HARVEY & WILLIAM W. HOGAN, ON THE EXERCISE OF MARKET POWER THROUGH STRATEGIC WITHHOLDING IN CALIFORNIA 8 (Apr. 24, 2001), at <http://ksghome.harvard.edu/~whogan.cbq.ksg/> (on file with author). See generally PAUL A. SAMUELSON & WILLIAM D. NORDHAUS, ECONOMICS 35 (16th ed. 1998) (discussing the properties of a perfectly competitive market as described by economist Adam Smith). The health and flexibility of a market is also determined by examining the elasticity of demand and supply, the elasticity of demand is measured by accounting for the relationship between a change in the price of a product and the corresponding change in demand for it. STANLEY FISCHER & RUDIGER DORNBUSCH, INTRODUCTION TO MICROECONOMICS 76-88 (1983). The elasticity of supply is measured by looking at the relationship between the price of the product and the quantity of the product produced. *Id.* at 88.

25. See HARVEY & HOGAN, *supra* note 24, at 7 (explaining the character of rigid markets, which cannot sustain any external shocks); see also discussion *infra* note 27 (discussing other external factors).

26. See CPUC STAFF REPORT, *supra* note 10, at 11 (documenting the extreme weather conditions of the summer of 2000); Bolton, *supra* note 14, at 318-19 (listing factors that caused the California electricity crisis, including diminished capacity, hot weather, decreased hydroelectric supply, higher than normal energy consumption, and an "over-reliance" in old plants).

supply shortage.²⁷

California's electricity price shocks of 2000 and 2001 led to outstanding costs for the distributing utilities,²⁸ not unlike stranded costs—those costs that utilities typically encounter when ensuring that their facilities and procedures comply with new regulations.²⁹ State and federal regulators were presented with the question of who should pay these costs, much like they were when stranded costs arose. Regulators ultimately required consumers to reimburse, at least in part, the utilities' costs through incredibly high retail rates.³⁰

This Comment examines FERC and CPUC solutions issued during the peak of the California electricity crisis.³¹ It argues that the costs incurred by the utilities, through their wholesale purchases, were analogous to stranded costs, first seen, most notably, in nuclear power plant decommissioning, and accordingly, these newer costs

27. See CAMBRIDGE ENERGY RESEARCH ASSOCIATES, SPECIAL REPORT: BEYOND CALIFORNIA'S POWER CRISIS: IMPACT, SOLUTIONS, AND LESSONS 5 (2001) (explaining that the use of high emission producing plants, like gas-powered plants, caused the emission ceiling, or limit, to be quickly reached by generating plants). Furthermore, the emission, or NOx, credits and gas, which powered the plant, became more expensive, thereby making electricity from these plants significantly more expensive. See *id.* at 5-6 (explaining that overly strict environmental standards handicapped firms that may have been able to contribute to supply because they had already used up their NOx credits due to previous supply demands and because acquiring these credits from other firms was next to impossible). NOx credits are environmental "chips" that excessively polluting gas-powered plants can purchase from lesser polluting plants so that the first plant can remain in good standing with environmental regulators. *Id.*

28. See, e.g., Kate Berry, *Electricity Bill Higher*, ORANGE COUNTY REG., July 20, 2001, at A1 (noting the price increases that businesses faced after regulators allowed retail rates to increase).

29. See Ajay Gupta, *Tracking Stranded Costs*, 21 ENERGY L.J. 113, 123 (2000) (defining stranded costs as those that would be recoverable under a regulatory scheme, but which would not be recovered under deregulation); see also Electric Utility Industry Restructuring Act of 1996, CAL. PUB. UTIL. CODE § 330(t) (West Supp. 2001) (stating that, under the deregulation transition period, the electric firms must have a "fair opportunity" to fully recover the costs associated with deregulation); Gupta, *supra*, at 113 (noting that stranded costs are usually associated with a change in regulatory policy or the implementation of a deregulation policy).

30. See, e.g., Electric Utility Rate Stabilization Act of 2001, S.B. 78, 2001 Assem., 2d Extraordinary Sess., § 3 (Cal. 2001) (stating that, as a result of sellers' market power, California utilities and their retail customers paid over \$8.9 billion in excess costs in the year preceding May 1, 2002); see also *The Electricity Emergency Act of 2001: Hearings on H.R. 1647 Before the Subcomm. on Energy and Air Quality of the House Comm. on Energy and Commerce*, 107th Cong. 13-15 (2001) (statement of Rep. Henry A. Waxman of California) (noting that wholesale prices have jumped from \$150 per mega-watt hour ("MWh") to \$1400 per MWh and that electricity, which cost \$7 billion in 1999, will cost \$70 billion in 2001).

31. Although the rate crisis has somewhat subsided in the Western States, FERC is still actively investigating the market structure and practices in the West. Accordingly, FERC continues to issue substantive orders on these issues and, most likely, these issues will remain before the Commission for many years to come.

should have received similar treatment by regulators.³² Finally, this Comment applies regulators' past stranded cost solutions from the deregulation of the electricity and gas industries,³³ which were developed in cases, orders, and prior articles,³⁴ to California's latest cost³⁵ dilemma.³⁶

Part I of this Comment outlines the historical stranded cost problem and the solutions that have been applied to these costs in the past.³⁷ Specifically, Part I discusses how the courts have treated stranded costs and addressed the ratemaking process. Next, Part I examines several types of stranded costs, the interests that regulators weighed when creating their solutions, and the final solutions regulators implemented.³⁸ In doing so, Part I reviews how FERC,³⁹ the CPUC,⁴⁰ and the courts have traditionally wrestled with the stranded cost problem.

Part II of this Comment addresses California's newest costs and the mechanisms behind the post-deregulation price surges,⁴¹ which led to

32. *See infra* Part III.A (considering the similarities between the costs of California's electricity crisis and other stranded costs of the energy industry).

33. *See infra* Parts I.B.2 & 3 (discussing the cost allocation solutions developed during the implementation of deregulation in the gas and electric industries through FERC orders).

34. *See, e.g.*, John Burritt McArthur, *Cost Responsibility or Regulatory Indulgence for Electricity's Stranded Costs?*, 47 AM. U. L. REV. 775 (1998) (discussing the historical progression of the market's attempt to deal with stranded costs); Michael T. Maloney et al., *On Stranded Cost Recovery in the Deregulation of the U.S. Electric Power Industry*, 37 NAT. RESOURCES J. 59 (1997) (detailing the economic consequences of compensating and the means of compensation for stranded costs).

35. Throughout this Comment, the costs at issue, California's utilities costs from the wholesale electricity price spikes of 2000 and 2001 will be referred to as California's "newest" or "latest" costs.

36. *See infra* Part III.C (arguing that a stranded cost solution would have greatly diminished the effect of the recent energy supply shortage in California).

37. *See generally* Paul Rogers & Charles D. Gray, *State Commission Treatment of Nuclear Plant Cancellation Costs*, 13 HOFSTRA L. REV. 443 (1985) (describing the regulatory solution applied to the first stranded cost problem created in the 1970s when multiple nuclear power plant projects were cancelled).

38. *See generally* 2 LEONARD SAUL GOODMAN, *THE PROCESS OF RATEMAKING* pt. 17, at 1001 (1998) (exploring the methods employed by regulatory commissions for valuing and weighing ratemaking factors, such as consumers' interest in paying fair, just, and reasonable rates and investors' interest in collecting a fair rate of return).

39. *See generally* Federal Power Act, 16 U.S.C. §§ 824a-824m (1994) (establishing FERC's powers to regulate the electricity industry).

40. *See* A.B. 1890, *supra* note 6 (implementing FERC's restructuring order).

41. *See generally* Lisa Simon & Carol Ann O'Dea, *Who Turned Out the Lights? A Look at the California Energy Crisis*, 12 ANDREWS UTIL. INDUS. LITIG. REP. 17, 19 (2001) (explaining that the decrease in California's supply of electricity made energy very valuable, and therefore, more expensive). The combination of increased demand and unregulated wholesale prices gave the generating firms the opportunity to charge unreasonably high prices. *Id.* *See generally* Eric Hildebrandt, *Potential Overpayments Due to Market Power in California's Wholesale Energy Market: May 2000-2001*, Presentation to FERC 10 (June 19, 2001) (providing an economic analysis of the degree to which wholesale prices and costs in the wholesale market have exceeded

rolling blackouts.⁴² Part II also examines several FERC and CPUC orders and highlights aspects of these orders that may have contributed to the utilities' insufficient cost recovery.⁴³

Part III discusses the central argument of this Comment: regulators should have analogized California utilities' latest costs to past instances of stranded costs and then applied the appropriate stranded cost solution. Specifically, Part III evaluates California's recent costs in light of the previous stranded cost solutions implemented during the deregulation of 1996. Part III also identifies similarities between the costs of 2001 and the past stranded costs of cancelled nuclear power plants and natural gas deregulation,⁴⁴ and further notes that recent FERC and CPUC actions depart from their own precedent, continuing a pattern of differential treatment between the electricity industry and other energy industries. Next, Part III argues that, because regulators failed to recognize the great similarities between California's new costs and past occurrences of stranded costs, they failed to apply the correct solution to the new costs. Finally, Part III recommends a solution to California's newest costs that will allow distributing utilities to remain financially viable and, ultimately, will lead to a substantially more stable electricity market in California. In addition, Part III explains that consumer needs will be met once supply and demand curves realign. However, in the interim, consumers will be called upon to assist with the high cost of electricity and will be asked to accept temporary rate increases.⁴⁵

competitive levels between May 2000 and May 2001, along with a breakdown by suppliers subject to FERC's market-based rate authority), available at <http://www.caiso.com/docs/2001/06/21/2001062113020923902.pdf>.

42. See Talev, *supra* note 3, at B1 (providing examples of California residents who were adversely affected by the blackouts); Pool, *supra* note 4, at B1 (illustrating how California citizens suffered from the blackouts).

43. See *infra* notes 125-53 and accompanying text (analyzing the actions that FERC and CPUC took in response to the energy crisis in California); see, e.g., S. Cal. Edison, 205 Pub. Util. Rep. (PUR) 4th 396 (Cal. Pub. Util. Comm'n 2001) (Duque, H., concurring in part and dissenting in part) (arguing that it is unjust to require consumers to reimburse the utilities); Order 888, *supra* note 9, at 21,629 (instituting a deregulated wholesale electricity market).

44. See, e.g., Jessie J. Knight Jr., *Reforming California: Reflections on the Morning After*, 136 PUB. UTIL. FORT. 66 (2001) (describing the effect that deregulation has had on costs within the electricity industry); Mary Micheletti, *Marketing Power*, L.A. DAILY J., Oct. 13, 1997, at 5 (addressing concerns over outstanding deregulation costs).

45. See *infra* notes 217-18 and accompanying text (detailing the market-stabilizing effects of passing costs on to the exiting customers, or those that leave their original, or default, utilities in search of cheaper electricity).

I. EXAMINING HISTORICAL STRANDED COSTS AND SOLUTIONS

Historically, "stranded costs" are defined as a regulated firm's past expenses and investments that have not and will not be recovered in a new market structure, due to either government regulations or physical shifts in the market.⁴⁶ One issue that consistently arises with stranded costs is who will pay for these unexpected costs?⁴⁷ Although there is consensus that the interests of consumers and investors must be balanced, there is much debate as to how these concerns should be weighed.⁴⁸

Most recently, stranded cost problems came to the forefront of energy regulation during the energy crisis of the 1970s.⁴⁹ Faced with the argument that, in order to ensure the utilities' viability and

46. TIMOTHY J. BRENNAN ET AL., A SHOCK TO THE SYSTEM: RESTRUCTURING AMERICA'S ELECTRICITY INDUSTRY 95-96 (1996). As regulations change or as energy-producing firms depart a regulated market and enter a competitive marketplace, they may not be able to earn enough profits to cover long-term investments and other long-term commitments previously required by regulations. *Id.* at 97-99. *See* JAMES C. BONBRIGHT ET AL., PRINCIPLES OF PUBLIC UTILITY RATES 38 (Public Utilities Reports, Inc. 1988) (1961) (describing sunk, or stranded, costs as those that are irreversible due to their specificity and because once invested in, they are difficult to exit without great loss); *see also* WILLIAM J. BAUMOL ET AL., THE CHALLENGE FOR FEDERAL AND STATE REGULATORS: TRANSITION FROM REGULATION TO EFFICIENT COMPETITION IN ELECTRIC POWER 33-34 (1995) (explaining that consumers may not end up bearing stranded costs in a new market structure because of regulators' disinterest in cost recovery in deregulated markets. *See generally*) JEFFREY L. HARRISON ET AL., REGULATION AND DEREGULATION 478-92 (1997) (providing a complete pedagogical treatment of stranded costs and their relationship to the process of entering a deregulated market).

47. *See* BRENNAN, *supra* note 46, at 96 (acknowledging that public utilities and FERC continue to debate the question of who will pay for stranded costs). Several factors must be considered in this analysis, including: (1) who bore the risk of the cost; (2) which parties derived benefits from the cost-producing endeavor; and (3) the security of the initial investment. *Id.* at 103-04. *See generally* A. Lawrence Kolbe & William B. Tye, *The Duquesne Opinion: How Much "Hope" is There for Investors in Regulated Firms?*, 8 YALE J. ON REG. 113 (1991) (discussing several methods of calculating which parties will bear the ultimate responsibility for stranded costs).

48. *See* Covington & Lexington Tpk. Rd. Co. v. Sanford, 164 U.S. 578, 596-97 (1892) (addressing the need to weigh the interests of both consumers and investors at the dawn of regulation, by noting that corporations are not entitled, as of right, to realize a certain return on their capital stock and that the public should not be charged unreasonable rates so that stockholders can earn dividends); *see also* *In re Permian Basin Area Cases*, 390 U.S. 747, 792 (1968) (noting the Public Utility Commission's duty to balance consumer and investor interests). *Compare* Citizens Action Coalition, Inc. v. N. Ind. Pub. Serv. Co., 485 N.E.2d 610, 617 (Ind. 1985) (protecting consumer interests by disallowing stranded costs to be included, or amortized, into future rates), *with* Jersey Cent. Power & Light Co. v. FERC, 810 F.2d 1168, 1182 (D.C. Cir. 1987) (holding that initial investment costs could not be summarily excluded from the rate base and therefore prevented from being amortized over a fifteen year period into the rate base).

49. *See, e.g.*, Emergency Natural Gas Act of 1977, Pub. L. No. 95-2, § 474, 91 Stat. 4 (1977) (granting the President power to relieve the existing natural gas crisis that existed as the result of limited oil exports from the Middle East).

uninterrupted service, these costs had to be recovered,⁵⁰ regulators were forced to decide whether the energy industry should absorb the costs of its progressive projects, such as nuclear power plants, or whether consumers should reimburse, through an increased rate base, the industry for developing projects that ultimately would produce public benefits—i.e. continuing to meet growing consumer demand.⁵¹

The courts considered this question long before the energy crisis of the 1970s, as firms have been seeking stranded cost recovery since the industrial revolution.⁵² Although no clear answers have been offered as to which method is preferred, courts have allowed several recovery methods that permit utilities to include part of their costs in retail rates.⁵³

A Judicial Solutions to the Stranded Cost Problem

At the beginning of the twentieth century, the development of large industries, such as railroads, required strict government regulation to prevent unfair business practices and the development of monopolies.⁵⁴ As a result of reoccurring instances of stranded

50. See Pat Wechsler, *Nuclear Power: Who Foots the Bill?*, DUN'S BUS. MONTHLY, June 1984, at 70-71 (discussing the enormous costs accumulated by power plant cancellations).

51. Compare William J. Baumol & J. Gregory Sidak, *Stranded Cost Recovery: Fair and Reasonable*, PUB. UTIL. FORT., May 15, 1995, at 22-23 (arguing that regulators should permit utilities to pass stranded costs on to consumers, for both efficiency and equity reasons, while they take steps to promote competition in the electric power industry) with Robert J. Michaels, *Stranded Investment Surcharges: Inequitable and Inefficient*, PUB. UTIL. FORT., May 15, 1995, at 21 (arguing that, with few exceptions, it is both fair and efficient for utilities to be forced to pay for their stranded costs).

52. See, e.g., *Nebbia v. New York*, 291 U.S. 502, 530 (1934) (holding that the Milk Control Board's order was not unreasonable or arbitrary and that constitutional due process protections did not prohibit the state from fixing the selling price of milk so that it included incurred costs); *Missouri ex rel. S.W. Bell Tel. Co. v. Pub. Serv. Comm'n*, 262 U.S. 276, 287 (1923) (holding that a telephone company was entitled to a fair return, and thus replacing some of its costs, on the reasonable value of the property at the time it was being used for the public); *Smyth v. Ames*, 169 U.S. 466, 546-47 (1898) (holding that the basis of all calculations as to the reasonableness of rates to be charged by a corporation must be the fair value of the property being used by it for the convenience of the public, which often covered the corporation's costs in serving the public).

53. See *infra* Part I.A (detailing the various recovery methods that courts have allowed).

54. See *Nebbia*, 291 U.S. at 525 (stating that, when the government regulates an industry by setting rates, the end result cannot be "unreasonable, arbitrary or capricious"). The Supreme Court developed these methods while considering whether the resulting rates were confiscatory, or amounted to a "taking" under the due process clause of the Constitution. See U.S. CONST. amend. V (preventing the federal government from depriving someone of property without due process of law); U.S. CONST. amend. XIV, § 1 (prohibiting state actions which deprive any person of property without due process of law). When utilities challenge

costs, the courts developed four methods by which industries could include these costs in retail rates,⁵⁵ thus passing some of these costs on to consumers.⁵⁶

First, the courts have allowed all *prudent* investments to be included in the rate base, regardless of whether they are used or useful,⁵⁷ which returns both invested capital and a standard return⁵⁸ on that capital to investors.⁵⁹ The second method, called the *modified prudent* method, precludes the inclusion of "unused and unuseful"

government-mandated rates, the courts must examine: (1) the utility's gross income under the rate in question; (2) the concurring operating expenses; (3) the rate base on which the utility should earn a return; and (4) the fair rate of return on the rate base. See *Missouri ex rel. S.W. Bell Tel. Co.*, 262 U.S. at 291 (Brandeis, J., dissenting) (noting that the first two considerations are not as difficult to ascertain as the last two factors). The amount of risk involved in investments is also considered when calculating the fair rate of return. See generally 1 GOODMAN, *supra* note 38, pt. 9, at 571 (discussing the various historical methods for calculating the rate of return and rate base).

55. See KEITH M. HOWE & EUGENE F. RASMUSSEN, PUBLIC UTILITY ECONOMICS AND FINANCE 65 (1982) (explaining that retail utility rates, or revenues, are calculated according to the formula: $R = O + (v - d) \times r$, where "O" represents the utility's operating costs, "v" is the historical cost of the productive assets, "d" is the depreciation of those assets, and "r" is the allowed rate of return). The rate base is the difference between the historical cost of productive assets and the depreciation of those assets (" $v - d$ "), and the normal rate of return of comparable firms is the rate base times the allowed rate of return (" $(v - d) \times r$ "). HARRISON, *supra* note 46, at 355-56.

56. See *infra* notes 57-62 and accompanying text (discussing the four methods that courts have developed to include stranded costs into retail rates).

57. See James J. Hoecker, "Used and Useful": Autopsy of a Ratemaking Policy, 8 ENERGY L.J. 303, 312 (1987) (explaining that costs are used and useful where they directly benefit consumers, build reserves, or are necessary to ensure projected future capabilities).

58. See J. GREGORY SIDAK & DANIEL F. SPULBER, DEREGULATORY TAKINGS AND THE REGULATORY CONTRACT 4 (1997) (defining the "regulatory contract" as a theoretical contract that utility providers enter into with regulators upon their initial entry into the market). In essence, the provisions of this contract provide that in exchange for being required to provide services to the public and being regulated as to the retail rates they can charge, the utilities will be guaranteed a fair and competitive return on their investments. *Id.* (citing *Gen. Motors Corp. v. Tracy*, 519 U.S. 278, 294-97 (1997)). This return assists the utilities in securing and attracting new investors to ensure that the utility will remain financially viable and thus continue serving the public. *Id.*

59. See *Missouri ex rel. S.W. Bell Tel. Co.*, 262 U.S. at 289 (developing the prudent investment standard for calculating allowable revenues for utilities). Justice Brandeis defines a prudent investment as one that is reasonable, not dishonest or wasteful. *Id.* at 290 n.1. He further notes that investments are presumed to be reasonable unless shown to be otherwise. *Id.* The prudent investment standard, also known as the historical cost standard, allows utilities compensation for the annual cost of their prudent investments at the time of investment. *Id.* at 309-10. However, this leaves the utilities with a standardized rate of return. *Id.* Cf. *Smyth v. Ames*, 169 U.S. 466, 546 (1898) (holding rates must be based on the fair value of the property used by the utility that is ultimately for convenience of the public). *But cf.* *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 309 n.6 (1989) (asserting that Brandeis's approach requires less speculation by ratemaking bodies because it does not require a determination of the market value of the utility as was required in *Smyth*).

investments in the rate base and returns to the utilities all invested capital along with a return on the “used and useful” component of the investment.⁶⁰ The third method, or *used and useful* method, allows a return of the entire initial investment with a profit on the “used and useful” portion of the investment.⁶¹ Finally, although rarely used, investment returns may be calculated by examining the *fair value* of a utilities’ property.⁶²

In *Federal Power Commission v. Hope Natural Gas Co.*,⁶³ the Supreme Court announced that any of these methods could be used to calculate rates so long as the end result of the rates was just and reasonable.⁶⁴ In a later case, *Jersey Central Power v. FERC*,⁶⁵ the Court

60. See *Duquesne Light*, 488 U.S. at 310-12 (observing that the Pennsylvania Public Utilities Commission first conceived the modified prudent approach). This method, used when the prudent investment never becomes “used and useful,” or never serves the public, allows all the lost capital to be amortized into the rate base, but only allows a return on the used and useful part of the investment. *Id.* at 310 n.7; see also BONBRIGHT, *supra* note 46, at 275 n.28 (defining amortization as an equal allocation of costs over a period of years equal to the number of years of benefit).

61. See BONBRIGHT, *supra* note 46, at 257 n.28 (commenting that, although many states check the prudence of investments at the beginning of a project, before construction begins, the used and useful method considers the prudence of investments only in some instances). Justice Cardozo, outlining the used and useful method, stated that the market or book value of utilities’ assets not currently in use should not be included in the rate base unless they are “working capital,” or very close to being online. See *Columbia Gas & Fuel Co. v. Pub. Utils. Comm’n*, 292 U.S. 398, 404-06 (1934) (concluding the issue of whether a plant is close to being online must be determined by the trier of fact, “in light of all circumstances”); see also *In re Penn. Water & Power Co.*, 8 F.P.C. 1, 48 (1949) (finding expenses that related to plant operation or experimental improvements, that were attempted and abandoned, could not be included in the rate base because they were never “put to permanent use”), *aff’d sub nom Penn. Water & Power Co. v. Fed. Power Comm’n*, 343 U.S. 414 (1952); *In re Chi. Dist. Elec. Generating Corp.*, 2 F.P.C. 412, 422-23 (1941) (disallowing construction deferral costs, such as interest accrued while the project was suspended, as a component of the used and useful construction costs), *modified*, 8 F.P.C. 746 (1949). In general, costs are considered “used and useful” where: (1) there is a direct benefit to consumers; (2) there is a secondary benefit to the costs such as building reserves; or (3) the costs are necessary in order to anticipate future consumer needs. Hoecker, *supra* note 57, at 312.

62. See *Smith*, 169 U.S. at 546-47 (stating the factors that must be considered in calculating the fair value of the property being used by the utility). These factors include: (1) the original cost of construction; (2) the amount spent on permanent improvements; (3) the amount and value of stocks and bonds; (4) present construction costs; (5) the utilities’ earning capability under statutorily mandated rates; and (6) the total operation expenses. *Id.* But see *Fed. Power Comm’n v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944) (concluding the fair value method is not the only constitutional way to compute rates and that the historical cost, or prudent investment, method is allowable); ALFRED KAHN, *ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS* 38 (1988) (criticizing the *Smith* factors as the “bane” of public utility regulation which resulted in years of controversy).

63. 320 U.S. 591 (1944) (reversing the lower court’s decision to allow a local state utilities commission to interfere with a private company’s rates by issuing an order setting rates).

64. See *id.* at 601-02 (holding that the rate orders issued by commissions must be looked at in their entirety when determining whether the orders meet the just and

revisited the *Hope* “just and reasonable” test,⁶⁶ and applied the test, holding that FERC must address whether its calculations of the utility’s rate base were just and reasonable where FERC implemented the used and useful⁶⁷ method of calculation.⁶⁸

The Supreme Court reaffirmed the *Hope* test in *Duquesne Light Co. v. Barasch*,⁶⁹ recognizing that while certain rate methods might be more appropriate in particular instances, the Constitution does not require one specific method of calculation.⁷⁰ Additionally, the Court stressed that regulators must be *consistent* in applying their ratemaking formulas.⁷¹ While this series of rulings established an outline for regulators, it did not concretely determine which parties should pay what costs, thereby leaving the issue of cost allocation to the discretion of regulators.

reasonable requirement, and further, that “[i]t is not the theory but the impact of the order that counts”). The *Hope* Court also stated that when Congress created the Natural Gas Act, it never specified which ratemaking method should be used. *Id.* at 601; *see* Natural Gas Act § 4(a), 15 U.S.C. § 717c(a) (1994) (stating that “[a]ll rates and charges made, demanded, or received . . . and all rules and regulations affecting or pertaining to such rates or charges, shall be just and reasonable.”); *cf.* Federal Power Act § 205, 16 U.S.C. § 824d(a) (1994) (“FPC”) (stating all electricity rates and regulations made must also be “just and reasonable”). *But cf.* Natural Gas Act § 6, 15 U.S.C. § 717e(a) (1997) (noting that the FPC may consider actual, legitimate property costs, associated depreciation, the fair value of the property, the original cost of the property, and the cost of any additions when establishing rates). The *Hope* Court stated that, although the method employed to compute retail rates may be imperfect, the resulting rate order is the “product of expert judgment which carries a presumption of validity.” 320 U.S. at 602. Finally, the Court noted that when a rate order allows a company continued success, financial integrity, and the ability to attract capital while compensating investors for their assumed risks, then the order cannot be unjust, even if the investment return is meager. *Id.* at 605.

65. 810 F.2d 1168, 1178 (D.C. Cir. 1987) (requiring the lower court to allow a rehearing where a utility was not allowed to include costs from a cancelled nuclear power plant in its rate base).

66. *See Hope*, 320 U.S. at 601 (establishing a standard where as long as rates were “just and reasonable,” the method used to create the rates would not be relevant).

67. *See Hoecker, supra* note 57, at 312 (explaining that used and useful costs are included in the rates by amortizing them into the rate base over the course of years).

68. *Jersey Cent. Power*, 810 F.2d at 1176. The court in *Jersey Central Power* concluded that courts must examine, in detail, whether the resulting rates constitute a reasonable balance between investor interests in maintaining financial stability and consumer interests in fair, just, and reasonable rates. *Id.* at 1177-78.

69. 488 U.S. 299, 315-16 (1989) (holding that a state commission did not violate the Constitution by not allowing cancelled nuclear costs in a utility’s rate base).

70. *See id.* at 316 (recognizing that adoption of a single theory of ratemaking as a constitutional requirement would preclude states from developing other methods that could equally benefit consumers and investors). In *Duquesne Light*, a strict requirement of a single ratemaking method would have barred Pennsylvania from developing its “modified prudent investment” method that greatly benefited investors and consumers. *Id.* at 316 n.10.

71. *See id.* at 315 (explaining that constitutional questions would arise where a state utility commission arbitrarily switched “back and forth” between ratemaking methods in a way that forced investors to bear the risks of bad investments at certain times and denied them the benefit of good investments at other times).

B. Traditional Stranded Costs and Regulatory Solutions

When allocating costs, regulators conventionally have implemented stranded cost recovery in three forms: (1) full cost recovery by energy firms from consumers;⁷² (2) partial, or balanced, cost recovery shared proportionally between firms and consumers;⁷³ and (3) prohibited recovery, which forces firms to treat costs as pure loss.⁷⁴ The third recovery method is typically most attractive to consumers; however, a balanced method, like the partial recovery method, most likely is a better stabilizer for market structures and retail rates.⁷⁵

1. Stranded costs from nuclear plant cancellations

In the 1960s, nuclear power was touted as a future source of electricity that would be "too cheap to meter."⁷⁶ Consequently, orders for nuclear electricity-producing plants tripled in 1974 from the 1960s.⁷⁷ Despite this high demand, environmental concerns arose,

72. See, e.g., Order 888, *supra* note 9, at 21,629 (allowing firms to fully recover their stranded costs by charging departing customers a fee and charging new transmission firms an access-based fee); AB 1890, *supra* note 6, at 1 (allowing firms to charge an exit fee).

73. See NAT'L ASS'N OF REGULATION UTIL. COMMISSIONERS, 1984 ANNUAL REPORT ON UTILITY AND CARRIER REGULATION 591-92 (1985) (showing that twenty-nine of thirty-five state commissions allowed partial recovery of costs incurred as a result of cancelled nuclear power plants, but disallowed any profits on investments, thereby requiring the firms to absorb the remaining loss).

74. See *Am. Gas Ass'n v. FERC*, 912 F.2d 1496, 1506 (D.C. Cir. 1990) (noting FERC's power to adjust contracts between suppliers and jurisdictional customers). Firms can still recover costs by writing off old investments, selling off generation plants, deferring tax benefits, or fixing current contracts. See RICHARD G. LIPSEY ET AL., *ECONOMICS* 179 (7th ed. 1984) (noting that according to economists, prohibiting stranded cost recovery best fosters deregulation's goal of attaining a completely competitive market); *FERC Commissioners, Sharp, Display Ramifications of Court's Energy Ruling*, ENERGY REP., July 18, 1994, available at 1994 WL 2490462 (asserting that stranded investments are "uneconomic assets" that occur in every business, which are unduly protected by regulation). Economists argue that the principle of "bygones are bygones" applies because stranded costs have no bearing on the current or future status of a firm and do not influence profit-making decisions. See LIPSEY ET AL., *supra*, at 179 (crediting the "bygones are bygones" principle as the rationale for disconnecting firms from stranded cost concerns). This principle describes sunken, or stranded, costs as losses that should not be considered if they cannot be affected by future decisions. *Id.*

75. See Order 888, *supra* note 9, at 21,541 (designing partial recovery rules in an effort to remove impediments to competition in the marketplace and provide the ability for all sellers to compete on a fair basis).

76. See MARC ALLEN EISNER ET AL., *CONTEMPORARY REGULATORY POLICY* 245 (2000) (noting that, after the military decided to allow nuclear power for civilian use, the electricity industry became exponentially excited about its prospects until environmental concerns began to surface).

77. JOSEPH P. TOMAIN ET AL., *ENERGY LAW AND POLICY* 393 (1989) (explaining that between 1965 and 1968, utilities ordered forty-nine nuclear power plants totaling almost 40,000 megawatts of capacity and that between 1970 and 1974, 145 nuclear power plants were ordered).

especially after the infamous nuclear accident at Three Mile Island,⁷⁸ which caused many utilities to cancel their orders for plants⁷⁹ despite their limited financial liability in the event of accidents.⁸⁰ These cancellations left billions of dollars in investments stranded and without cost recovery vehicles.⁸¹

Although there was no uniform way that regulators resolved this stranded cost problem, both regulators and the courts allowed the utilities to recover most of their investments based on the concept of a bargain, which distributed the cancellation costs between the involved parties without assigning responsibility to any specific party.⁸² In addition, the majority of states allowed utilities to amortize, over an average of fifteen years, the outstanding and operating costs of retail rates.⁸³ In contrast, other states only allowed the prudently incurred costs to be included in the rate base.⁸⁴ Another group of

78. See generally WILLIAM F. FOX, JR., FEDERAL REGULATION OF ENERGY § 22.10, at 559-62 (1983 & Supp. 1993) (explaining the extent of the environmental damage caused by the accident at Three Mile Island and the effect it had on the public's perception of nuclear power).

79. See ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, U.S. COMMERCIAL NUCLEAR POWER: HISTORICAL PERSPECTIVE, CURRENT STATUS & OUTLOOK 15 (1982) (documenting the large nuclear accident at Three Mile Island and the cancellation of nuclear power plants that occurred afterwards); see also Rogers & Gray, *supra* note 37, at 445 n.9 (stating that, in addition to the Three Mile Island event, two Arab oil embargoes and high inflation rates also led utilities to reassess construction plans and cancel almost eighty percent of planned nuclear plants by the early 1980s).

80. See 42 U.S.C. § 2012(i) (1994) (limiting utilities' liability in the event of nuclear accidents in an effort to protect the public interest by continuing to encourage development of the atomic energy industry to meet growing consumer demand); see also TOMAIN, *supra* note 77, at 392-93 (noting that the utilities were only liable for the maximum insurance coverage at the time (sixty million dollars) and that the federal government would guarantee an additional five hundred million dollars in the event of nuclear accidents).

81. See, e.g., Citizens Action Coalition of Ind., Inc. v. N. Ind. Pub. Serv. Co., 485 N.E.2d 610, 617 (Ind. 1985) (prohibiting utilities from amortizing sunk costs as a result of cancelled nuclear power plants because such property was not "used and useful"); ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, NUCLEAR PLANT CANCELLATIONS: CAUSES, COSTS, & CONSEQUENCES xviii tbl. ES2, xxi tbl. ES4 (1983) (illustrating the extent of investments that were left without any return or reimbursement); see also Rogers & Gray, *supra* note 37, at 444-45 (pointing out the strain on the utilities' finances and the costs associated with cancelled plants).

82. See David A. Kosh, *Regulatory Alternatives for Treating Project Cancellations and Premature Retirements*, in CHALLENGES FOR PUBLIC UTILITY REGULATION IN THE 1980s 635, 638-41 (Harry M. Trebing ed., 1981) (asserting that regulators should not have charged the losses resulting from cancellations to the shareholders and utilities, but rather, to the ratepayers).

83. See discussion *supra* note 55 (explaining the components of a traditional ratemaking formula); see, e.g., Long Island Lighting Company-Phase II-Proceeding on Motion of the Commission to Investigate the Cost of Construction of the Shoreham Nuclear Generating Facility, 25 N.Y.P.S.C. 5904, 1985 WL 258217, at *4 (allowing some of the costs to be included in retail rates).

84. See, e.g., Long Island Lighting Company, 1985 WL 258217, at *2 (concluding that \$1.2 billion of the project's estimated capital cost of \$4.2 billion should not be included in the company's rate base because the company imprudently managed the

states prohibited the stranded costs from being included in retail rates because they were never used or useful to consumers; however, these states usually allowed the utilities to receive higher than average rates of return on their investments.⁸⁵

2. *Stranded costs from natural gas pipeline deregulation*

In addition to nuclear plant cancellations, the 1980s brought another type of stranded costs to light. As a consequence of the gas shortages in the 1970s and the excess gas supply of the 1980s,⁸⁶ FERC deregulated the natural gas pipeline, or transportation, industry in the late 1980s through a series of orders requiring gas-producing firms to unbundle their production and transportation capabilities.⁸⁷ Because of these unexpected regulatory changes, the gas firms were faced with an enormous loss of business and were suddenly forced to function in a competitive market with noncompetitive equipment and facilities.⁸⁸ In addition, many of the stranded costs came from an inability to sell gas trapped in take-or-pay contracts that mandated selling prices that were higher than market levels.⁸⁹ The pipelines were trapped: they were forced to compete in the market yet were bound by their take-or-pay contracts; they were bound to purchase expensive supplies that rarely returned any profit.⁹⁰

construction of the project). The disallowance of imprudently incurred costs is fundamental to utility regulation law. *Id.*

85. *See, e.g., Citizens Action Coalition of Ind.*, 485 N.E.2d at 617 (finding that the Commission's order, which allowed the costs of a cancelled nuclear generating plant to be amortized, was not statutorily authorized because the plant never provided any public benefit).

86. *See generally* PAUL W. MACAVOY, *THE NATURAL GAS MARKET: SIXTY YEARS OF REGULATION AND DEREGULATION* 76-77 (2000) (explaining that the variance in gas supplies created an impetus for restructuring wellhead and city gate merchant contracts). In response, FERC and the courts eased access to separate transportation services for producers, dealers, distributors, and consumers. *Id.*

87. *See, e.g.,* Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, 62 Fed. Reg. 10,204 (Mar. 6, 1997) (codified at 18 C.F.R. pt. 284) [hereinafter Order 636-C] (deregulating the pipeline segment of the natural gas industry to improve its competitive structure within the market).

88. *See* RICHARD H. K. VIETOR, *CONTRIVED COMPETITION: REGULATION AND DEREGULATION IN AMERICA* 149-57 (1994) (describing one pipeline company's experience with the deregulation process and the enormous losses it faced as a result).

89. *See* *Associated Gas Distribs. v. FERC*, 824 F.2d 981, 1021 (D.C. Cir. 1987) (explaining that take-or-pay contracts involved selling gas at higher than market rates and required the pipelines either to purchase a specific amount of gas or "prepay" for that intended amount regardless). Theoretically, the prepayments could be applied to the pipeline's subsequent acquisition of gas supplies. *Id.*

90. *See generally id.* at 1026-27 (discussing the consequences of FERC continuing to require pipelines to honor its take-or-pay contracts, which would include customers exiting the pipelines' service because of higher than average rates).

These costs were the first *systemwide* stranded costs directly caused by FERC's actions.⁹¹ Despite the pipelines' pleas that if they were held responsible for these stranded costs they would face bankruptcy, FERC issued Order 500,⁹² which required pipelines to absorb much of the losses from the new regulatory structure.⁹³ FERC continued to cite market inadequacies, rather than deregulation, as creating stranded costs and implemented a policy of cost responsibility that required all involved parties—including pipelines and consumers—to share in the pipelines' "unwise" business decisions, but only if these decisions were deemed prudent and "used and useful."⁹⁴

3. California's stranded costs of electricity deregulation

After the limited success of gas pipeline deregulation, regulators decided, for many of the same market-related reasons, to deregulate the electricity industry.⁹⁵ Again, the industry faced the development of stranded costs associated with the deregulation movement, which began in the early 1990s.⁹⁶ These new stranded costs forced regulators to revisit the question: who should pay for stranded costs?⁹⁷ FERC addressed this question on May 10, 1996, in Order 888, by requiring utilities to open their transmission lines and to sell off, or functionally separate, their generating capabilities.⁹⁸ FERC held that

91. Cf. discussion *supra* Part I.B.1 (discussing the stranded costs of nuclear plant cancellations, which, although not systematic, were fairly common).

92. Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol, 52 Fed. Reg. 30,334 (Aug. 14, 1987) (codified at 18 C.F.R. pts. 2, 284) [hereinafter Order 500]. This Order was issued in response to *Associated Gas Distribs.*, in which the court, after noting that FERC failed to exercise "reasoned decisionmaking," vacated and remanded FERC's earlier Order 436, which had given pipelines the option to open pipeline access to other firms and gave customers a choice in gas providers. 824 F.2d at 1023, 1044.

93. See Order 500, *supra* note 92, at 30,337-38 (requiring pipelines to absorb a large part of their stranded costs, yet taking action designed to mitigate the subsequent financial effects).

94. *Id.* at 30,338 (requiring pipelines to absorb between twenty-five and fifty percent of stranded costs, yet allowing them to recover an equal percentage from their customers with any leftover costs being added to the retail rates).

95. See Order 888, *supra* note 9, at 21,630 (noting that the court's reasoning in the gas context equally applies to the successful transition of the electric industry).

96. *Id.* (recognizing the possibility that certain utilities will be left with unrecoverable costs or costs will be inequitably shifted to customers).

97. See 2 LEONARD SAUL GOODMAN, THE PROCESS OF RATEMAKING pt. 17, at 1004 (1998) (explaining that regulators consider the following factors when answering this question: (1) the fairness and reasonableness of rates; and (2) the fairness of investors' rate of return on their investments).

98. Order 888, *supra* note 9, at 21,630 (requiring the unbundling of vertically integrated utilities and open access to utilities' transmission lines so as to enable consumers to choose their electricity producers from a competitive market). See generally Joskow, *supra* note 7, at 117-18 (illustrating the traditional U.S. structure of the electricity industry and explaining that this organization differed from the electric power industries throughout the world); BRENNAN, *supra* note 46, at 17

the utilities would recover all their lost revenues and project expenses by charging departing customers an exit fee, or a future transmission cost fee, which would be added to a departing customer's new electric service.⁹⁹ There were no discussions of the industry's absorption of any of the costs.¹⁰⁰

In accordance with Order 888, California enacted Assembly Bill 1890 ("AB 1890")¹⁰¹ on September 24, 1996, deregulating California's

(noting the electricity industry is made up of three components: (1) generation (power plants); (2) transmission networks (grids); and (3) distribution (local)); HERBERT HOVENKAMP, FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE § 1.4b (1994) (discussing natural monopolies which occur when a firm's costs decrease as its output increases, reaching the market's saturation point). Before Order 888, the utility firms resembled natural monopolies because they owned their own generating companies and controlled the transmission networks. *Id.* § 1.4b.

99. FERC Filing of Rate Schedules, 18 C.F.R. § 35.26 (1996); FERC Rules of Practice and Procedure, 18 C.F.R. § 385 (1996). Deregulating the generation component and allowing other firms to access the transmission networks caused the original natural monopolies to lose business because end retail customers could choose new electricity providers; FERC allowed the utilities to choose between charging the firms accessing the transmission networks an access tariff and charging retail customers exit penalties, which were included in their new services and added because they were abandoning their original electricity provider. Order 888, *supra* note 9, at 21,629; *see also* SIDA & SPULBER, *supra* note 58, at 289-305 (concluding that access charges are compatible with energy deregulation and that, contrary to common criticism, access charges permit prices to fall and output to expand under a variety of market structures). Furthermore, FERC required that these fees correspond to "legitimate and verifiable" stranded costs, that is, the opportunity costs resulting directly from the provision of transmission services. *See* Energy Policy Act of 1992, 16 U.S.C. §§ 824j-824k (1994) (requiring that transmitting utilities assume all costs "properly allocable" to the provision of transmission services, but permitting the recovery of costs that promote the economically efficient transmission and generation of electricity); Order 888, *supra* note 9, at 21,601 (explaining that, when transmission capacity is constrained such that a utility does not expand capacity, the utility can charge transmission customers the higher of embedded costs or legitimate and verifiable opportunity costs, but not the sum of the two); *Cajun Elec. Power Coop., Inc. v. FERC*, 28 F.3d 173, 177-78 (D.C. Cir. 1994) (*per curiam*) (noting FERC's belief that stranded cost recovery is necessary to lure utilities into competition and explaining that the subsequent legislation that gave FERC the power to order this compensation). Ultimately, retail customers bore the cost of these stranded costs. *See* Transmission Access Policy Study Group v. FERC, 225 F.3d 667, 717-19 (D.C. Cir. 2000) (upholding FERC's requirement that customers pay all stranded costs); *Competitive Issues in Electricity Deregulation: Hearing Before the House Comm. on the Judiciary*, 106th Cong. 16-19 (1999) (statement of T.J. Glauthier, Deputy Secretary, U.S. Dep't of Energy) (noting that, under the proposed FERC electricity restructuring legislation, FERC could authorize the imposition of transmission surcharges on customers, in order to pay for certain "other costs" of the utilities). *See generally* Order 888, *supra* note 9, at 12,277 (asserting FERC's jurisdiction over retail stranded costs despite the states' power to implement the recovery of these costs); PETER FOX-PENNER, ELECTRIC UTILITY RESTRUCTURING: A GUIDE TO THE COMPETITIVE ERA ch. 16 (1997) (analyzing the stranded cost recovery debate).

100. *See* Transmission Access Policy Study Group, 225 F.3d at 723 (deferring to FERC's allocation and explaining FERC's rationale for exempting the electricity industry from absorbing any of the costs associated with deregulation).

101. AB 1890, *supra* note 6. California's new regulations created two new market bodies which monitored and facilitated electricity sales, the Power Exchange ("PX") and the Independent System Operator ("ISO"), and mandated that all utilities

wholesale electricity market and setting the stage for a new cost problem.¹⁰² In addition, the bill allowed the major utilities¹⁰³ to recover stranded costs from departing customers through a competitive transition charge ("CTC") until March 31, 2002, or until the utilities recovered all of their stranded costs, whichever came first.¹⁰⁴

In exchange, the bill required the non-public, independently-owned utilities ("IOUs") to freeze their retail rates at 1996 pre-deregulation rates and to implement a ten percent rate discount in 1998, actions that would last until their stranded costs were fully recovered or until March 31, 2002.¹⁰⁵ The bill also required the utilities to participate in real-time electricity trades and forbade them from entering into long-term contracts with generators.¹⁰⁶ This plan functioned well until the end of 1999, when unexpected price shocks¹⁰⁷ penetrated retail rates due to depleted wholesale supplies.¹⁰⁸

submit to their authority while exempting municipalities and irrigation districts. *See id.* § 10, arts. 3, 4 (detailing the duties of the PX and ISO, respectively). The PX is a type of commodities market where generating companies compete in response to bids placed for the hourly clearing price of electricity units. The PX collects these bids and then picks the lowest generated bid as the market-clearing price for that hour; this bid then dictates the price at which all electricity will be bought and sold for that hour. *See generally* CALIFORNIA ENERGY COMMISSION, NEW OPTIONS FOR AGRICULTURAL CUSTOMERS: CALIFORNIA'S ELECTRIC INDUSTRY RESTRUCTURING 10-13 (1998) (explaining the role of the PX in the newly restructured system); *see also* AB 1890, *supra* note 6, § 10, art. 3 (defining the ISO as an operating body that ensures reliability, plans delivery of electric supplies, and oversees reserve facilities). The utilities retained ownership of their transmission networks, but operational control was turned over to the ISO to ensure equity. Electric Utility Industry Restructuring Act of 1996, CAL. PUB. UTIL. CODE §§ 348, 359 (West Supp. 2001).

102. *See* CALIFORNIA ENERGY COMMISSION, *supra* note 101, at 10-13 (explaining that those non-public, independently-owned utilities ("IOUs") that were unable to compete in the new market were accordingly unable to recoup their investments in the new electricity infrastructure through electricity sales, thereby leaving these IOUs with outstanding stranded costs). These stranded costs emerged from the utilities' investments in infrastructure, such as the transmission networks and their power plants, that were not competitive in the newly deregulated market. *Id.*

103. *See* ENERGY INFO. ADMIN., U.S. DEP'T OF ENERGY, PROVISIONS OF AB 1890, at <http://www.eia.doe.gov/cneaf/electricity/california/assemblybill.html> (listing Pacific Gas & Electric (PG&E), San Diego Gas & Electric (SDG&E), Southern California Edison (SCE), PacifiCorp, Sierra Pacific Power, and Bear Valley Electric as the IOUs covered by California Assembly Bill 1890) (last modified July 29, 2002).

104. *See* CAL. PUB. UTIL. CODE §§ 368-369, 375 (requiring the IOUs to file cost recovery plans with the CPUC). The CPUC also established a mechanism that recovered costs from all existing and future customers in the service territory of the utility. *Id.* § 369.

105. CAL. PUB. UTIL. CODE § 368(a); *see* S.B. 85, 2001 Assem., 2d Extraordinary Sess. (Cal. 2001) (prohibiting the CPUC from automatically raising retail rates solely based on the expiration of the ten percent discount).

106. AB 1890, *supra* note 6, at 1.

107. *See* CPUC STAFF REPORT, *supra* note 10, at 7 (discussing the external factors leading to high energy prices in California, such as inclement weather, low reserves, and high demand).

II. A NEW MARKET STRUCTURE CREATING NEW COSTS

In accordance with AB 1890, California phased out retail rate subsidies paid to utilities and exited the wholesale electricity market in 1998.¹⁰⁹ The end of government subsidies marked the beginning of rapidly accumulating and unpaid costs, which were hauntingly similar to the previous stranded costs.¹¹⁰ As with earlier costs, regulators were forced to address the issue of who should pay for these costs: utilities or consumers.¹¹¹

A. *The Newest Costs: Mimicking Stranded Costs*

Irregularities within the electricity market structure and an enormously depleted electricity supply led to the development of California's new costs.¹¹² Wholesale prices increased dramatically because of scarce resources, strict environmental regulations, inclement weather, and possibly because of strategic withholdings by generating plants and power marketers.¹¹³ The utilities' revenues were limited because retail rates were still controlled by price caps as established by AB 1890,¹¹⁴ and the utilities were banned from entering any long-term contracts to secure lower rates.¹¹⁵ Consequently, the

108. See John C. Hilke & Michael Wise, *Who Turned Out the Lights? Competition and California's Power Crisis*, ANTI-TRUST, Summer 2001, at 77-78 (discussing the causes of California's energy crisis).

109. See AB 1890, *supra* note 6, at 1 (including provisions to compel the utilities to decrease their reliance on government subsidies). See generally Hilke & Wise, *supra* note 108, at 76 (noting California's status as the first U.S. jurisdiction to undertake a large scale electric power market restructuring plan).

110. See Hilke & Wise, *supra* note 108, at 77 (explaining that, because demand for energy quickly outstripped supply, the government had imposed consumer price caps on IOU energy rates, and IOUs found themselves having to supply customers with power at rates much lower than the price IOUs had to pay for such power).

111. See BRENNAN, *supra* note 46, at 96 (noting that regulators grappling with the stranded cost issue should consider which party: (1) underwrote the risk of the costs; (2) derived benefit from the restructuring plan; and (3) held a security interest in the initial investment).

112. See ENERGY INFO. ADMIN., *supra* note 103 (describing the costs faced by wholesalers because the utilities were defaulting on debts and because the consumers were not supplying utilities with these costs).

113. See Hilke & Wise, *supra* note 108, at 77-78 (citing unusual weather patterns and increased plant outages and demand as contributing to the electricity shortages). However, even if all facilities had been online during this period, California still may have faced scarce resources because of an unexpected spike in demand after 1996. *Id.* Where there is a high demand and short supply for a commodity, suppliers may exercise market power or collude to drive up prices. See generally SAMUELSON & NORDHAUS, *supra* note 24, at 170-76 (discussing the mechanisms in effect in an imperfect market).

114. See Order 888, *supra* note 9, at 21,541 (allowing wholesale firms to compete on an open market, but not allowing the service utilities, the buyers on the new open market, to do the same).

115. See *id.* at 21,541-42 (providing that contracts existing at the time of the bill's enactment would be reviewed on a case-by-case basis to assure that they did not

utilities were trapped and unable to recover the high prices they paid for wholesale electricity from their customers.¹¹⁶ Most importantly, the utilities, as “default providers” by law, were forced to provide continuous service despite their inability to pay for wholesale supplies, leading several major utilities to face the real possibility of bankruptcy.¹¹⁷

In the end, the utilities were unable to pay for wholesale supplies and consequently, lost their credit-worthiness with the generating companies, who refused to continue selling electricity to the utilities.¹¹⁸ Ultimately, the utilities were left without supplies, but were still accountable for providing default service. This accountability dilemma created the power shortages and rolling blackouts of 2001.¹¹⁹ Because of the market’s dysfunction, California’s legislature ordered wholesale firms to continue selling to the utilities, thus temporarily ensuring an uninterrupted supply of electricity.¹²⁰

Finally, the utilities faced the high costs of wholesale electricity, costs which were not fully recovered from consumers; wholesalers faced the costs of unpaid electricity supplies,¹²¹ and consumers faced high retail rates.¹²² Although regulators were aware of California’s new electricity costs, they hesitated to address them, as evidenced by a series of inconsistent and detached orders, which were disappointing because they: (1) failed to recognize similarities between the new

create discriminatory pricing on transmissions policies).

116. See Andrew Noceto et al., *Public Utilities Commission*, 16 CAL. REG. L. REP. 158, 159 (1999) (explaining that AB 1890 froze the utilities at June 10, 1996 rate levels until the utilities recovered all the original stranded costs incurred by deregulation); PULLER, *supra* note 24, at 45 (pointing out that utilities were required to buy wholesale electricity at high prices and were required to sell to retail customers at much lower prices).

117. See generally CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 13 (recognizing that companies which serve the retail market are “default providers,” meaning that they are required by law to serve their clients regardless of any outstanding costs).

118. Hilke & Wise, *supra* note 108, at 77.

119. See *id.* (citing the utilities’ inability and refusal to pay their power bills as the immediate cause of the rolling blackouts).

120. See A.B. 1, 2001 Assem., 1st Extraordinary Sess. (Cal. 2001) (enacting legislation that temporarily resolved electricity shortages by allowing electricity to flow through the utilities to consumers).

121. See ENERGY INFO. ADMIN., *supra* note 103, at 4 (describing the massive costs faced by wholesalers because the utilities were defaulting on hundreds of millions of dollars in debts every day).

122. See Paul L. Joskow & Edward Kahn, *A Quantitative Analysis of Pricing Behavior in California’s Wholesale Electricity Market During Summer 2000: The Final Word 1* (Feb. 4, 2002), at <http://econ-www.mit.edu/faculty/pjoskow/files/JoskowK.pdf> (reflecting on the incredible retail rates consumers had to pay) (on file with author); see, e.g., S. Cal. Edison, 205 Pub. Util. Rep. 4th (PUR) 396 (Cal. Pub. Util. Comm’n 2001) (raising consumer rates without investigating the basis for utilities’ requests for rate base increases).

costs and traditional stranded costs; (2) failed to reconcile inconsistent electricity regulatory policies; and (3) failed to apply an already established solution.¹²³

B. FERC Actions

In response to the severe price spikes of the summer of 2000, FERC issued an order on November 1, 2000 ("November Order"),¹²⁴ which incorporated the results of several FERC investigations¹²⁵ and identified several factors possibly creating unjust and unreasonable rates, including market structure, market rules, and an unbalanced supply and demand schedule.¹²⁶

Although FERC did not conclude that the rates were *de facto* unjust and unreasonable, it did note that the rates were *possibly* unjust¹²⁷ and directed the California market to implement a two-year price mitigation measure that included limiting the market-clearing price of the Power Exchange ("PX"),¹²⁸ but excluded refunds to customers.¹²⁹ Finally, FERC warned the CPUC that without

123. See *infra* Part II.B and II.C (detailing FERC and CPUC orders issued during electricity crisis); Part III (assessing FERC's response in the context of FERC's past electricity cost-recovery strategy and its failure to use Order 888's policy of passing costs on to customers to stabilize wholesale prices in the short term).

124. See *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,358 (2000) (insisting that FERC's interstate jurisdiction must be expanded to ensure just and reasonable intrastate wholesale rates). The Commission claimed it had a "statutory responsibility" not only to repair flawed market designs, but also to safeguard the market from unjust and unreasonable rates. *Id.* at pp. 61,366-367. *But see id.* at p. 61,371 (stating that FERC's motivation for monitoring intrastate wholesale prices was to provide rate certainty, not to "redress traumatic and inequitable circumstances").

125. See *generally San Diego Gas & Elec. Co.*, 92 FERC ¶ 61,172 (2000) (denying San Diego Gas and Electric's request for a wholesale price cap of \$250 per MWh). Perhaps FERC did not know at the time how to deal with the California "situation"; FERC had only begun to investigate the "justness and reasonableness of the rates and charges" of the wholesale sellers within its jurisdiction. *Id.* at p. 61,603 (describing FERC's power to investigate under § 206 of the Federal Power Act ("FPA")). See *generally* Federal Power Act § 206, 16 U.S.C. § 824e(a) (2000) (stating that the Commission may hold a hearing and, upon a finding that a rate is unreasonable, may fix or adjust rates accordingly). Additionally, FERC directed its staff to conduct a study examining the possibility of market power and market competition issues. *San Diego Gas & Elec. Co.*, 92 FERC ¶ 61,172, at p. 61,603.

126. See *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,349 (recognizing that these factors caused, and "continue to have the potential to cause" unjust rates).

127. See *id.* at p. 61,350 (finding it was possible that wholesalers exercised market power).

128. See *id.* at p. 61,367 (indicating that pursuant to price mitigation measures, bids in excess of \$150 per MWh would be prohibited from setting the market clearing price). See *generally* AB 1890, *supra* note 6, at 27 (describing the role of the PX as a commodities market where generators competed to bid the lowest on hourly rates of electricity, the lowest bids become the clearing price for that hour, thus dictating the price of electricity for that hour).

129. See *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,370 (asserting FERC's authority to order the refunds for a period of fifteen months following the

improvements to California's supply and demand schedules price shocks and blackouts were inevitable.¹³⁰

FERC revisited California's deteriorating electricity market in a December 15, 2000 order ("December Order")¹³¹ that urged the CPUC to encourage utilities to move away from the hourly PX market and to enter into long-term contracts.¹³² Additionally, FERC explained that its November Order held only that retail rates were *possibly* unjust,¹³³ but they were within the "zone of reasonableness," thus satisfying the "just and reasonable" requirement of the Federal Power Act.¹³⁴ Accordingly, FERC refused to adjust retail rates because there was no record¹³⁵ of unjust and unreasonable or discriminatory

Commission-established refund, but concluding that such refunds were not the fundamental solution to the problems occurring in California markets, and thus not part of the Commission's initial remedial plan). This order also lifted the requirement that the three main utilities had to buy all their electricity from the PX. *Id.* at 61,367. In 1998, the main utilities (San Diego Gas and Electric, Southern California Edison, Pacific Gas and Electric, PacifiCorp, Sierra Pacific Power, and Bear Valley Electric) began bidding, in an auction format, for power through the PX on a day-ahead schedule. *See* ENERGY INFO. ADMIN., *supra* note 103, at 1 (documenting the opening of the PX). The PX compiled the aggregate supply and demand prices to arrive at a single hourly market-clearing price at which all transactions were settled. *See generally* EDWARD KAHN ET AL., SIMULATING ELECTRICITY RESTRUCTURING IN CALIFORNIA: INTERACTIONS WITH THE REGIONAL MARKET (Univ. of California Energy Inst. POWER Program, Working Paper No. 038, 1996) (discussing the functioning of the newbodies).

130. *See San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,350 (urging the CPUC to take immediate action and adopt FERC's recommendations).

131. *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294, at p. 61,980 (2000).

132. *See id.* at p. 62,011 (declaring that even long-term contracts at pre-regulation rates are just and reasonable). *But see* CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 43-44 (claiming that even long-term contracts would have created problems for utilities as they would have overpaid for electricity supplies that would eventually become cheaper).

133. *See San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,349 (indicating that the market structure and rules for wholesale sales of energy are flawed, thereby possibly causing "unjust and unreasonable rates;" however, this is only a potential cause, not an explicit one; therefore, rates are only possibly unjust).

134. *See San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294, at p. 61,998 (explaining that retail rates must fall within a "zone of reasonableness," and otherwise, FERC must correct the rates) (citations omitted); *see also* *Envtl. Action v. FERC*, 996 F.2d 401, 410 (D.C. Cir. 1993) (asserting FERC's authority to police and adjust rates when they are unreasonable, thereby violating the Federal Power Act); *Farmers Union Cent. Exch. Inc. v. FERC*, 734 F.2d 1486, 1502 & 1509 (D.C. Cir. 1984) (affirming zone of reasonableness principles). *But see* *United States v. Ill. Cent. R.R.*, 263 U.S. 515, 524 (1924) ("Rates may lie within the zone of reasonableness and yet result in undue prejudice."); *Ala. Elec. Coop., Inc. v. FERC*, 684 F.2d 20, 27 (D.C. Cir. 1982) (holding a reasonable rate system deemed to be reasonable may be still be unlawful if it charges two customers with similar service needs different prices, thereby constituting unlawful discrimination).

135. *See San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294, at p. 62,019 (stating that, in order for FERC to adjust prices under authority of the Federal Power Act, it must be presented with evidence of unjust rates); *see also id.* (refusing to cap retail rates because FERC did not have knowledge of all rates at all times, and commentators did not meet the burden of showing that doing so would be justified and serve the public

rates.¹³⁶

In a March 9, 2001 order ("March Order"), FERC set a monthly "just and reasonable" rate screen, or proxy market-clearing price,¹³⁷ for stage three emergency hours.¹³⁸ Whenever utilities charged rates over this rate screen during specified hours, they would be required either to refund the excess to consumers or to provide justification to the CPUC.¹³⁹ An April 26, 2001 order ("April Order") expanded the rate screen established by the March Order, thus making utilities accountable for refunds during a greater number of hours.¹⁴⁰ Finally, in an effort to mitigate possible market power, FERC required that all hourly real-time trades pass through the rate screen.¹⁴¹ FERC left the

interest). *See generally* Federal Power Act, 16 U.S.C. §§ 824d-824e (1994) (requiring proof of unjust and unreasonable rates).

136. *But see San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294, at p. 62,031 (Massey, W., concurring) (asserting that the retail rates are not just and reasonable and that market power has been exercised). Commissioner Massey further stated that the wealth transfer between the utilities and the generators is "staggering and completely defies public interest." *Id.* Finally, the Commissioner predicts that the high costs will eventually be passed onto consumers in accordance with precedent, causing a "perfectly legitimate and understandable uproar." *Id.*; *see, e.g.,* *Miss. Power & Light Co. v. Mississippi ex rel. Moore*, 487 U.S. 354, 376-77 (1988) (asserting FERC's exclusive jurisdiction over wholesale rates and asserting that states may not bar utilities from passing rates, as approved by FERC, on to consumers); *Nantahala Power & Light Co. v. Fed. Power Comm'n*, 384 F.2d 200, 214 (4th Cir. 1967) (recognizing that the Federal Power Act requires utilities to charge reasonable and nondiscriminatory rates). *See generally San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,294, at p. 62,032 (Herbert Jr., C., concurring) (discussing that, even though rate screens were set up, FERC did not fully discuss potential refunds).

137. *See* CALIFORNIA ENERGY COMMISSION, *supra* note 101, at 10-13 (describing a proxy-clearing price as one that the PX would determine as the price at which all electricity would be sold for that particular hour).

138. *See* ENERGY INFO. ADMIN., *supra* note 103 (defining stage three emergencies as hours where electricity reserves are less than one-and-a-half percent of capacity).

139. *See San Diego Gas & Elec. Co.*, 94 FERC ¶ 61,245, at p. 61,864 (2001) (requiring utilities to comply with retail rate screens and refunds procedures from January 2001 through April 2001). Again, Commissioner Massey departed from the majority by claiming that the rate screen, which was implemented only during stage three emergencies, and produced refunds estimated at \$69 million, was too limited in scope and should instead be applied to stage one and two emergencies. *Id.* at p. 61,865 (Massey, W., dissenting). The Commissioner further stated that market power can be exerted under conditions other than stage three conditions. *Id.* at p. 61,866.

140. *See generally San Diego Gas & Elec. Co.*, 95 FERC ¶ 61,115, at p. 61,354 (2001) (extending the rate screen from stage three conditions where reserves fall below 1.5 percent to hours where reserves fall below 7.5%).

141. *See San Diego Gas & Elec. Co.*, 95 FERC ¶ 61,418, at p. 62,551 (2001) (applying the price mitigating rate scheme to all hours within the real-time, PX, market); *see also San Diego Gas & Elec. Co.*, 96 FERC ¶ 61,254, at p. 62,002 (2001) (stating that the June 19, 2001 order required utilities to either refund the excesses of rate screens or provide justification for not issuing refunds, in an effort to help mitigate market power); *San Diego Gas & Elec. Co.*, 96 FERC ¶ 63,007, at p. 65,038 (2001) (establishing that in compliance with FERC's June 19, 2001 order, estimated refunds will be close to \$1 billion). The reason for requiring real time is based on the fact that under competitive conditions, generators that have energy available in real time

task of making consumers and utilities whole to the CPUC, which had little room to maneuver within FERC's parameters.¹⁴²

C. CPUC Solutions

In the midst of FERC's actions, the CPUC issued an order on January 1, 2001, which prevented several utilities from filing bankruptcy and required them to continue providing service to consumers.¹⁴³ The order also raised retail rates by one cent per kilowatt hour ("kWh").¹⁴⁴ Despite this effort, on the eve of January 18, 2001, due to a continued inability to purchase supplies, the utilities faced such extreme shortages that thousands of California residents faced imminent blackouts.¹⁴⁵ In the early morning hours of January 18, 2001, the Governor was forced to sign an emergency executive order freeing funds from the Department of Water Resources ("DWR") to purchase extraordinary amounts of power, temporarily ensuring an uninterrupted electricity supply.¹⁴⁶

On May 15, 2001, the CPUC issued an order which increased consumer rates¹⁴⁷ by three cents per kWh, adding up to \$2.5 billion in

should sell that available energy at a rate covering marginal costs since there is no alternative purchaser at that time. *San Diego Gas & Elec. Co.*, 95 FERC ¶ 61,418, at p. 62,551.

142. *See* 16 U.S.C. § 824(b) (2000) (stating that FERC has jurisdiction over all facilities which engage in wholesale energy selling but not over facilities which generate energy for use in intrastate commerce).

143. *See* S. Cal. Edison, 205 Pub. Util. Rep. (PUR) 4th 396, 417 (Cal. Pub. Util. Comm'n 2001) (finding the January order necessary to ensure the utilities would continue delivering uninterrupted power to consumers).

144. *See id.* at 396 (noting this increase will result in a nine percent rate increase for residential consumers); *id.* at 417 (Duque, H., concurring in part and dissenting in part) (asserting that the order does not go far enough to correct the problem and also discussing cost responsibility). Commissioner Duque explains that, although the utilities cannot be responsible for the high wholesale rates, they are responsible for the rate freeze established by AB 1890; the Commissioner also argues that consumers have "absolutely no responsibility" for the high rates and it is unjust to require consumers to reimburse the utilities. *Id.*

145. *See* Nancy Vogel & Nancy Rivera Brooks, *The California Energy Crisis: Rolling Blackouts Push Energy Crisis from Threat to Reality*, L.A. TIMES, Jan. 18, 2001, at A1 (indicating utilities' failure to pay over \$215 million in bills resulted in massive power shortages, leaving grid operators empty-handed and forcing them to scramble to collect power from generating companies in Canada and the West).

146. *See id.* (noting that without the Governor's action most of Southern California would have faced extensive blackouts).

147. *See* S. Cal. Edison Co., Cal. Pub. Util. Comm'n Decision 01-05-064, Application No. 00-11-038 (May 15, 2001), at 2 (stating that, while FERC was indifferent to the situation and had not performed its legal duty to ensure just and reasonable rates, the CPUC was doing its best, within the authority given to it by the California legislature and Governor, to resolve the rate problem). The CPUC noted that FERC would be responsible for any hardship that families might suffer as a result of the increase in electricity rates approved by the CPUC pursuant to FERC's directives. *Id.* at 2. Furthermore, the CPUC sympathized with the outrage that California consumers will experience. *Id.* The CPUC also stated that the rates within

revenues for each utility.¹⁴⁸ The order also created a five-tiered billing system, increasing customer rates between zero and forty-seven percent.¹⁴⁹ After insisting that its definitive goal was equity and that the impact of the three-cent increase would be *de minimis*, the CPUC justified the rate increase by claiming its effect was mild compared to the effects of FERC actions.¹⁵⁰

Despite CPUC's good faith attempts to solve the electricity shortage, there remained a scarcity of viable solutions to the newest cost problem. This motivated California's legislature to offer alternative solutions,¹⁵¹ such as creating a new government authority

the order were most likely not just and reasonable, but illegal under the Federal Power Act. *Id.* at 3. *See generally* Federal Power Act § 205, 16 U.S.C. § 824d(a) (2000) (requiring that all rates which are not "just and reasonable" are unlawful).

148. *See* S. Cal. Edison Co., Cal. Pub. Util. Comm'n Decision 01-05-064, Application No. 00-11-038 at 5-6 (explaining that additional revenues were for compliance with California Assembly Bill 1X). This surcharge would be effective beginning June 1, 2001 and would also be retroactive from March 27, 2001 to June 1, 2001 with additional revenues (\$903 million) amortized over twelve months beginning on June 1, 2001. *Id.* at 3. The utilities would recover over \$3.4 billion in the first year of this order. *Id.* California Assembly Bill 1X authorized the Department of Water Resources ("DWR") to begin purchasing electricity and supplying consumers. *Id.* Furthermore, it added § 360.5 to the Public Utilities Code, creating a "California Procurement Adjustment" and requiring utilities to pay part of this Procurement to the DWR. Electrical Restructuring: Energy Efficiency Programs, AB. 1, 2001 Assem., 1st Extraordinary Sess. (Cal. 2001); *see* Electric Power, S.B. 31, 2001 Assem., 1st Extraordinary Sess., § 1 (Cal. 2001) (prohibiting causes of actions upon rehearing arising out of California Assembly Bill 1X if not filed within ten days of CPUC ruling). The Procurement was calculated by taking the difference between "the generation related component of the retail rate and the sum of the costs of the utility's own generation, and . . . [other] contracts." Electrical Restructuring: Energy Efficiency Programs, CAL. PUB. UTIL. CODE § 360.5 (West Supp. 2001).

149. S. Cal. Edison Co., Cal. Pub. Util. Comm'n Decision 01-05-064, Application No. 00-11-038 at 3-4. The tiers were organized as follows: (1) customers using up to 100% of a baseline amount of electricity, which varied by climate zone, did not incur an increase; (2) customers using 100-130% of the baseline did not incur an increase either; (3) those using 130-200% of the baseline saw an increase of 12% or less; (4) 200-300% use of the baseline incurred an increase of 29% or less; and (5) over 300% use led to a 47% or less increase. *Id.*

150. *See id.* at 8 (stating that CPUC intended to implement a system which would result in a fair allocation of energy costs). CPUC also argued that since DWR was now purchasing power, consumers were spared the overwhelming actual cost of energy. *Id.*

151. *See, e.g.*, California Electricity Consumers' Bill of Rights, S.C.R. 47, 2001 Assem., 2d Extraordinary Sess. (Cal. 2001) (asserting that a windfall tax would discourage firms from charging high rates and stabilize the market, and further stating that the citizens of California need a bill of rights to protect themselves from unconscionable rates); Electrical Windfall Profits Tax: Consumer Credit, S.B. 1, 2001 Assem., 1st Extraordinary Sess. (Cal. 2001) (requiring firms to pay the windfall tax for all sales accumulated for rates over a retail rate limit), *amended by* S.B. 1, 2001 Assem., 2d Extraordinary Sess. (Cal. 2001); *see also* Excess Gross Receipts from Electrical Energy Distribution Tax, AB. 2, 2001 Assem., 2d Extraordinary Sess. (Cal. 2001) (requiring utilities to withhold the tax from payments received from customers and remit the funds to the Franchise Tax Board to be distributed to consumers, and exempting local public utilities and already effective contracts for electricity from this tax).

that ensured sufficient and reliable generating capacities within the state.¹⁵² However, the legislative solutions were not necessarily effective in solving the cost problem and had regulators examined the nature of the new costs more diligently, they may have realized that a proper solution already existed in regulatory history.¹⁵³

III. SOLVING THE NEWEST COST PROBLEM: EXAMINING PAST SOLUTIONS

California's latest utility cost problems are the result of an ailing electricity market¹⁵⁴ experiencing market-distorting events,¹⁵⁵ such as bad weather, which caused supply and demand schedules to shift, and thus created price spikes and unreimbursed costs.¹⁵⁶ Like the stranded costs from cancelled nuclear plants and electricity deregulation, California's newest costs are the result of a combination of market-distorting events and regulatory action, which impacted the electricity market to the extent that California's market was inflexible and unable to respond to price spikes.¹⁵⁷ The market's inadequacies

152. *See* Consumer Power and Conservation Financing Authority, S.B. 6, 2001 Assem., 1st Extraordinary Sess. (Cal. 2001) (creating a new second regulatory body for California's energy industries).

153. *See, e.g.*, McArthur, *supra* note 24, at 120 (asserting that the lack of substantive difference between natural gas deregulation and electricity deregulation allowed for the deregulatory solution applied to one industry to be applied to the other).

154. *See generally* CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 9-19 (discussing the special nature of power markets, which must include capacity requirements and payments, diversified portfolios, and a wholesale/retail market alignment; elements which are not always possible in the electricity markets); SAMUELSON & NORDHAUS, *supra* note 24, at 35, 274 (explaining the elements of healthy markets and how they allow markets to function properly). For example, in most markets, companies have the option to stop sales temporarily and refuse to service new customers. CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 13. Utilities, however, are required to take new customers and provide the same rate plans. *Id.* Therefore, energy markets are not as well-structured as other competitive markets, thereby explaining the utilities' cost problems. *Id.* at 9-19.

155. Market distortions occur when an external event creates a disruption in the market equilibrium causing prices or costs to become exaggerated. *See generally* LIPSEY ET AL., *supra* note 74, at 938-46 (defining shock inflation as a "once-and-for-all" change that spikes prices upwards or downwards); STANLEY FISCHER & RUDIGER DORNBUSCH, INTRODUCTION TO MICROECONOMICS 2-19 (1983) (describing the events surrounding the price shock during the OPEC oil price increases in the late 1970s and its crippling effect on the economy).

156. *See* LIPSEY ET AL., *supra* note 74, at 51-54 (noting that external events can cause the demand curve to shift enough to cause large increases in price); *see also* TOMAIN, *supra* note 77, at 35 (1989) (explaining that government regulation itself may contribute to an increase in prices, but regulation may also be implemented to correct shifts in supply and demand curves (citing RICHARD MUSGRAVE, THE THEORY OF PUBLIC FINANCE (1959))).

157. *See* SEVERIN BORENSTEIN, THE TROUBLE WITH ELECTRICITY MARKETS AND CALIFORNIA'S ELECTRICITY RESTRUCTURING DISASTER 2 (Univ. of California Energy Inst. POWER Program, Working Paper No. 081, 2001) (noting the price spike and corresponding market volatility is due to the high degree of connectivity of the

were aggravated by FERC and CPUC orders which failed to apply electricity cost recovery policy consistently.¹⁵⁸

A Waking up to the Reality of California's Costs

When California's regulators were assigning costs, they first should have considered diligently the similarities and differences between California's latest costs and other previous stranded costs of the energy industry.¹⁵⁹ Had these variances been thoroughly addressed, California's regulators would have realized the great similarities between these newest costs and stranded costs that the electricity, and partially the gas, industry faced during deregulation.¹⁶⁰ Consequently, regulators might have concluded that the utilities should have been fully compensated for their unrecoverable costs in order to ensure their continued viability and functionality.¹⁶¹ In addition, regulators may have kept in mind the ultimate purpose of regulation: to protect the public, which requires that regulators protect public service industries from unduly discriminatory and inconsistent cost recovery.¹⁶²

1. Market and regulatory causes of costs

When examining California's recent costs in light of previous stranded costs, especially those of the electricity industry, it is evident that California's newest costs are similar to stranded costs. This similarity is most evident when comparing the causes of past stranded costs and the causes of California's latest costs. Like many instances of stranded costs,¹⁶³ these latest costs were created by mostly

supply avenues and that a single supply mismatch effects supply and demand participants in both the long and short term markets); DOUGLAS R. BOHI & MICHAEL A. TOMAN, *THE ECONOMICS OF ENERGY SECURITY* 21 (1996) (explaining external factors may be introduced by outside policy action despite a stable market).

158. *See supra* Parts II.B & II.C (highlighting the orders that FERC and the CPUC issued throughout the electricity crisis).

159. *See discussion infra* Part III.A.1.

160. *See id.* (explaining that the newest costs are similar to the stranded costs incurred during the natural gas pipeline deregulation).

161. *Cf.* Order 888, *supra* note 9, at 21,627-29 (describing how FERC allowed utilities to recover costs during wholesale deregulation).

162. *See* EISNER, *supra* note 76, at 6 (noting that public interest principles continue to legitimize government regulation, especially where fair prices and honest dealings are at issue); 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, 1242 (1998) (emphasizing the long history linking the public utility concept and the duty to serve: the obligation of public utilities to provide extraordinary customer service).

163. *See* SIDA & SPULBER, *supra* note 58, at 29 (noting that stranded costs can arise out of deregulation, as previously regulated firms will lose business and will not be able to earn the same return of investments). *But see* Susan Rose-Ackerman & Jim Rossi, *Disentangling Deregulatory Takings*, 86 *VA L. REV.* 1435, 1457-58 (2000)

unforeseen regulatory action¹⁶⁴ and market events,¹⁶⁵ such as market power, tacit collusion, and strategic withholdings.¹⁶⁶

Most recently in California, regulators regarded utilities' outstanding costs as simply based on market and business decisions, not unlike regulators' treatment of the stranded costs of natural gas deregulation.¹⁶⁷ However, as regulators later recognized, even the stranded costs of natural gas deregulation were caused by regulatory actions.¹⁶⁸ Although the stranded costs of the nuclear power plant cancellations and decommissions were most directly caused by a lull in the demand for nuclear-powered electricity, this lull was caused by regulatory actions.¹⁶⁹ Because of public pressure, OPEC oil price shocks, oil embargoes, high inflation rates, and the events at Three Mile Island, regulators made it more difficult and expensive to bring nuclear plants on-line, and as a result, many utilities cancelled their orders.¹⁷⁰ Yet regulators allowed the utilities to recover all their costs associated with building these plants, although they were unable to earn any return on this capital.¹⁷¹

Similarly, California's newest costs were caused mostly by an empty supply base¹⁷² coupled with an increasing demand that was not satisfied;¹⁷³ however, the supply and demand mismatch was only

(excluding market events from the definition of stranded costs).

164. *See, e.g.*, Order 888, *supra* note 9, at 21,629 (recognizing the validity of recovering stranded costs created by unanticipated regulatory changes).

165. *See* discussion *supra* Part II.A (discussing the market mechanisms behind California's newest costs).

166. *See* Joskow & Kahn, *supra* note 122, at 22-34 (describing the withholding of physical energy supply which contributed to the latest series of stranded costs).

167. *See, e.g.*, S. Cal. Edison Co., Cal. Pub. Util. Comm'n Decision 01-05-064, Application No. 00-11-038, at 2 (May 15, 2001) (implementing a customer-wide retail rate increase necessitated by an "unbounded . . . wholesale price regime").

168. *See* Order 636-C, *supra* note 87, at 10,213 (admitting that, aside from market-driven forces, some regulatory forces also contributed to the pipelines' stranded costs).

169. *See* FOX, *supra* note 78, at 561 (summarizing the Nuclear Regulatory Commission's actions and recommendations, including an increased emphasis on safety, following the accident at Three Mile Island).

170. *See* NAT'L ASS'N OF REGULATORY UTIL. COMM'RS, 1984 ANNUAL REPORT ON UTILITY AND CARRIER REGULATION 591-92 (1985) (reviewing state procedures and administrative and judicial solutions implemented after hundreds of nuclear power plants were cancelled in the 1970s, which generally allowed the recovery of costs through amortization). These new regulations greatly increased plants' cost burdens. *Id.*

171. *See* *In re Carolina Power & Light Co.*, 55 Pub. Util. Rep. (PUR) 4th 582, 601 (N.C. Utils. Comm'n 1983) (holding that utilities must bear some of the risks of nuclear power plant cancellation and ratepayers must also be protected from high rates, thus balancing consumer and investor interests when calculating rates).

172. *See* SAMUELSON & NORDHALS, *supra* note 24, at 51-54 (explaining that when a product is in short supply, the price jumps and then the quantity demanded falls drastically).

173. *See* HARVEY & HOGAN, *supra* note 24, at 8 (discussing external events unique to

created as the direct result of the provisions of AB 1890 and accompanying regulations, which created poor price signals to investors and thus caused a lull in electricity generating facilities.¹⁷⁴ In addition, these provisions banned any kind of price-responsiveness that would have eventually evened out the supply and demand curves,¹⁷⁵ relying instead on a drop in demand in response to demand-side management measures encouraged by regulators.¹⁷⁶

California's newest costs also are analogous to the stranded costs incurred during the deregulation of natural gas pipelines, which again were the result of a combination of regulatory action and market circumstances.¹⁷⁷ During natural gas deregulation, the pipelines faced heavy functional depreciation from a newly competitive market structure.¹⁷⁸ In addition, the pipelines faced stranded costs caused by take-or-pay contracts, which forced utilities to purchase gas at a higher than average market price while still attempting to attract customers *and* make a profit: a next to impossible task.¹⁷⁹

A comparable set of circumstances caused California's latest costs, where wholesale firms exercising market power and tacit collusion also faced scarce resources, causing wholesale prices to spike.¹⁸⁰ As a consequence of wholesalers' high prices, the distributing companies were trapped and forced to purchase electricity at higher than normal prices.¹⁸¹ The utilities then were faced with the challenge of

the California market that affect costs and can influence behavior regarding the supply of energy, regardless of demand).

174. See CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 11 (noting there was no economic incentive for developers to build generating plants).

175. See *id.* at 13 (observing that the California rate freeze required new and existing customers to be charged the same fixed rate, regardless of wholesale rates).

176. See *id.* at 23 (asserting that demand-side conservation techniques require intensive consumer education campaigns while resulting in small reductions in usage compared with those resulting from price increases).

177. See *supra* note 168 and accompanying text (discussing FERC's delayed acknowledgement that its regulations contributed to the pipelines' stranded costs).

178. See CHARLES F. PHILLIPS, JR., *THE REGULATION OF PUBLIC UTILITIES* 261-64 (2d ed. 1988) (defining functional depreciation as depreciation resulting from "changes in technology, demand, or public requirements," which render physical assets obsolete).

179. See *Associated Gas Distrib. v. FERC*, 824 F.2d 981, 1026 (D.C. Cir. 1987) (acknowledging that, under the take-or-pay solution, pipelines will likely no longer be gas merchants because their customers are free to purchase gas from a provider with smaller contract liabilities).

180. See Joskow & Kahn, *supra* note 122, at 22-34 (presenting evidence of withholdings by wholesale firms).

181. See, e.g., Colin Drukker, *Economic Consequences of Electricity Deregulation: A Case Study of San Diego Gas & Electric in a Deregulated Electricity Market*, 36 CAL. W. L. REV. 291, 302 tbl. 1 (2000) (illustrating the discrepancy between the national average electricity rates of 8.90 cents per kWh and California's highest rates of 12.50 cents per kWh). This represents a difference in price of more than forty percent over the

trying to make a profit while under the pressure of CPUC-imposed price caps and the termination of government subsidies.¹⁸²

2. *Extent of the costs*

California's latest costs, in addition to stemming from a combination of regulatory and market causes, are comparable to stranded costs with respect to their scale and their subsequent effect on the electricity industry. By the spring of 2001, California's wholesale electricity industry faced over \$12 billion in unpaid or under-collected supplies.¹⁸³ These costs even surpassed the stranded costs that AB 1890 itself estimated for California's electricity deregulation in 1996, which amounted to only \$10 billion.¹⁸⁴

When implementing stranded cost recovery mechanisms during deregulation, regulators recognized the impact that a \$10 billion deficit would have on the industry, which is one of the reasons they allowed the electricity companies to recover these costs completely.¹⁸⁵ As of March 2001, the new underpaid costs of the electricity market far exceeded those of deregulation and should have weighed as heavily as those of deregulation, thus deserving similar, if not equal, treatment and consideration.¹⁸⁶

As a result of regulators' failure to allow utilities to recover these costs, several major utilities have filed Chapter 11, or reorganization, bankruptcy within the last year.¹⁸⁷ The following sections discuss how given the fact that California's latest costs were essentially stranded costs by nature, regulators failed to continue their interest in the utilities' financial viability. In order to ensure reasoned ratemaking and regulation, California's regulators should have remained consistent in their cost recovery policies.

national average. *Id.*

182. *See* CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 17-18 (noting the discrepancy between the price caps and the prices needed to avoid plant shutdowns during emergencies).

183. *Id.* at 41.

184. *See id.* at 41-42 (discussing how regulators had previously estimated stranded costs through appraisal of generation assets, a method many utilities rejected in favor of divestiture of generating assets through auction, which provided a truer valuation of generation-related stranded costs).

185. *See* Order 888, *supra* note 9, at 21,634 (allowing utilities to recover their stranded costs created by departing wholesale customers by charging them exit fees or transmission surcharges).

186. *See* ENERGY INFO. ADMIN., *supra* note 103, at 2 (documenting that between PG&E, SCE, and SDG&E as of early 2001, these utilities had overpaid more than \$12 billion in wholesale electricity in reality, this was a concrete figure).

187. *See id.* (listing major problems of the California electricity crisis, including PG&E's Chapter 11 filing on April 6, 2001, where the utility claimed they had spent over \$9 billion for wholesale power that was not recovered from retail sales).

B. *Repairing a Previously Consistent Cost Recovery Policy*¹⁸⁸

Although California's newest costs are physically most like the stranded costs of natural gas deregulation, it is important to focus primarily on the inconsistencies of FERC's electricity cost recovery policies.¹⁸⁹ When attempting to solve California's new cost problem, FERC failed to look carefully at its own energy precedent and apply it consistently.¹⁹⁰ As the Supreme Court established in *Duquesne Light Co. v. Barasch*, FERC should not alternate and drastically change its approach when applying stranded cost solutions as it has done with the current costs.¹⁹¹ By allowing utilities to recover a small percentage of their costs through across-the-board retail rate increases, FERC failed to apply its electricity cost recovery method, and instead misapplied a policy that only briefly surfaced during natural gas pipeline deregulation: cost responsibility.¹⁹²

FERC's misuse of cost responsibility is surprising given that FERC denounced this policy in its Order 636-C as a rare exception to an otherwise homogeneous cost recovery policy.¹⁹³ The theory behind

188. This Comment does not argue the legitimacy of cost recovery as a whole, but argues that consistent policies are necessary to ensure the success of energy regulation. *See generally* Regulation of Natural Gas Pipelines after Partial Wellhead Decontrol, 50 Fed. Reg. 42,408, 42,447 (Oct. 18, 1985), *vacated*, Associated Gas Distribs. v. FERC, 824 F.2d 981 (D.C. Cir. 1987), (stating that the risk of insufficient cost recovery encourages competitive, efficient, and responsible market participants and generally eliminates involuntary cost shifting and cross-customer subsidies); *Mkt. St. Ry. Co. v. R.R. Comm'n of Cal.*, 324 U.S. 548, 568-69 (1944) (holding that, when external market forces rather than regulators' rate decisions were the cause of railcar firm's decreased earnings, regulators were not responsible for compensating any losses to railcar firms); Alfred E. Kahn, *Competition and Stranded Costs Re-Visited*, 37 NAT. RESOURCES J. 29, 33 (1997) (noting the rule of cost recovery is not absolute and recovery of prudent costs has been disallowed where assets are not used or useful, or where other market forces have made recovery impossible).

189. *See supra* notes 177-79 (noting that California's newest costs are similar to natural gas stranded costs, because the distributing companies in both instances were forced to purchase supplies at higher than average market prices).

190. *See Duquesne Light Co. v. Barasch*, 488 U.S. 299, 315 (1989) (discouraging regulators from arbitrarily switching between different methods of ratemaking).

191. *See id.* (finding that varying ratemaking formulas in a way that forces investors to bear the risk of bad investments while denying investors profits from good investments is constitutionally questionable).

192. *See McArthur, supra* note 34, at 821 (defining the theory of cost responsibility, which was originally developed to hold cost-creating parties accountable by matching each party with the specific costs attributed to it).

193. *See Order 636-C, supra* note 87, at 10,212-13 (citing the unusual circumstances of the "take or pay" problem and the limited nature in time and scope of customers' departure from the pipelines); *Ala. Elec. Coop. Inc. v. FERC*, 684 F.2d 20, 27 (D.C. Cir. 1982) (endorsing FERC's policy of matching rates with the cost of service to each class of customers); *see also* Order 888-A, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 62 Fed. Reg. 12,274, 12,389-390 (Mar. 14, 1997) (codified at 18 C.F.R. pt. 35) [hereinafter Order 888-A] (acknowledging that the new direct assignment

cost responsibility is that costs are assigned to the parties that created them, in proportion to their contribution to the costs.¹⁹⁴ Additionally, in the deregulation of the natural gas pipelines,¹⁹⁵ regulators decided that, because they were unable to blame the costs on any specific party,¹⁹⁶ and the problems of the industry were mostly attributed to market (specifically supply) distortions, all involved parties would bear the burden of the costs.¹⁹⁷ In the end, the pipelines bore the bulk of the costs due to their alleged contributions to the costs by trapping their captive customers in take-or-pay contracts.¹⁹⁸

FERC's main downfall in applying this type of cost responsibility to California's newest costs was failing to realize that many of the pipelines created their stranded costs through their own actions,¹⁹⁹ however, the utilities of California did not create their insufficient supply conditions, nor did they cause the wholesale generators to raise their prices through possible collusion or market power.²⁰⁰ There was no free choice on the utilities' part,²⁰¹ and therefore, FERC could not conscientiously hold them responsible under traditional notions of cost responsibility.²⁰² Instead, FERC should have applied its purer version of cost responsibility, called cost causation, which it

approach to stranded costs is distinct from natural gas' cost recovery policy).

194. See generally McArthur, *supra* note 34, at 796 (stating that utilities would be responsible for recovering their stranded costs in a free market, and therefore, its role in creating costs must be considered when allocating cost responsibility).

195. See generally Order 636-C, *supra* note 87, at 10,204-05 (affirming deregulation of the natural gas industry and allocating pipeline costs evenly among consumers, producers, and transmission firms).

196. See Order 500, *supra* note 92, at 30,341-42, *vacated*, *Am. Gas Ass'n v. FERC*, 888 F.2d 136 (D.C. Cir. 1989) (affirming a policy of applying cost responsibility through "equitable sharing" rather than assigning blame for costs); Order 636-C, 62 Fed. Reg. at 10,213 (discussing FERC's inability to pinpoint blame).

197. See McArthur, *supra* note 34, at 803 (summarizing FERC's cost allocation solution for the gas industry).

198. See VIETOR, *supra* note 88, at 159-61 (discussing the process through which regulators finally settled on a cost recovery plan that would allow pipelines only to recover from consumers an amount equal to that which they absorbed themselves).

199. See McArthur, *supra* note 24, at 79 (explaining that, although the pipeline companies were regulated and subject to government policies, they were still private companies that were solely responsible for their wise and unwise business decisions and that holding them to their business decisions did not exploit their reliance on regulatory protections).

200. See Joskow & Kahn, *supra* note 122, at 17-22 (discussing evidence of gaps between capacity abilities and output and between NOx emission limits and outputs by generating plants, thus indicating dishonesty and collusion on the part of generators).

201. See AB 1890, *supra* note 6, at 1-2 (prohibiting utilities from exercising control over their transmission lines).

202. See *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,360 (2000) (noting FERC's priority of requiring the use of cost responsibility principles, although not to redress past inequitable circumstances, and concluding that strict application of cost responsibility leads to the most just results).

developed during electricity deregulation.²⁰³

During the wholesale electricity deregulation of 1996, FERC asserted that a broad distribution of costs among all retail customers would violate pure cost responsibility principles, because only utilities' departing customers specifically caused the stranded costs.²⁰⁴ Accordingly, FERC and the CPUC allowed stranded costs to be entirely passed through to departing customers after minor regulatory checks.²⁰⁵ This method²⁰⁶ was the looking glass through which regulators should have examined California's new costs, and consequently, allowed most of the utilities' costs to flow through directly to exiting consumers.²⁰⁷ An uninterrupted electricity cost recovery policy would lend itself to increased regulatory credibility because utilities and consumers would be better able to predict regulators' future treatment of unexpected costs and their correlating investment risks.²⁰⁸

Although it is equally difficult for FERC to pinpoint whether regulators, wholesalers, or utilities are to blame for the high wholesale rates and correspondingly high retail rates, regulators should continue to apply their principle of cost causation to the electricity industry.²⁰⁹ Although opponents of the continued use of

203. See *Sithe/Indep. Power Partners v. FERC*, 285 F.3d 1, 5 (D.C. Cir. 2002) (defining cost causation as the principle that all approved rates reflect, to one degree or another, those costs that were caused by the customer that caused them (citing *K N Energy, Inc. v. FERC*, 968 F.2d 1295, 1300 (D.C. Cir. 1992))).

204. See *San Diego Gas & Elec. Co.*, 93 FERC ¶ 61,121, at p. 61,365 (citing calculation problems as the reason for not attempting to charge all customers different rates, although, in reality, few customers have exited their previous utility firms).

205. See Order 888, *supra* note 9, at 21,629 (allowing utilities to charge customers that were exiting their service, but requiring stranded costs to be mitigated and verifiable); Walter R. Hall, II, *Securitization and Stranded Cost Recovery*, 18 ENERGY L.J. 363, 374-75 (1997) (explaining that the firms only had to show that they had made their best efforts to mitigate stranded costs).

206. See *Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, 59 Fed. Reg. 35,274, 35,277 (June 29, 1994) (codified at 18 C.F.R. § 35 (1994)) (allowing stranded costs to be divided among departing wholesale customers, remaining customers, and shareholders); William J. Baumol & J. Gregory Sidak, *Stranded Costs*, 18 HARV. J.L. & PUB. POL'Y 835, 847 (1995) (documenting FERC's ideas about mitigating stranded costs and who should bear the costs).

207. See *supra* Part III (explaining FERC's actions as in line with its precedent actions during electricity deregulation).

208. See *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 315 (1989) (holding that ratemakers, or regulators, must apply consistent rate formulas so that in parts of the country with similar market conditions, the methodologies (and rate) will be similar). This policy lends itself to a reliable risk analysis tool for investors. *Id.*

209. See Order 888-A, *supra* note 193, at 12,393-394 (noting that, by continuing to apply its principle of cost causation to stranded costs, FERC is taking steps to lower wholesale and retail rates); McArthur, *supra* note 34, at 914 (stating that FERC's application of the cost responsibility method to the electric industry will ensure more equitable results, regardless of who is to blame for the high wholesale prices); see also

the cost causation principle might argue that it unduly discriminates against customers who exercise the choice of deregulation, there will be no such concerns so long as all exiting consumers, as a class, are treated equally.²¹⁰ In addition, as long as FERC reaches a fair end result, the method of its cost allocation is not critical.²¹¹

C. Continuing Electricity Regulatory Policy

Despite regulators' good intentions in implementing checks for cost recovery, such as requiring firms to mitigate costs so that they are just and reasonable, in the public interest, and equitable,²¹² these checks prevented California's latest costs from effectively showing up on retail customers' electricity bills.²¹³ Although the rate increases theoretically increased customer billing, it was not sufficient to relieve the utilities' costs, because the utilities did not feel any beneficial effects of the rate increases.²¹⁴

This Comment recommends that applying the cost causation principles of deregulation, specifically those incorporated in Order 888, would have allowed the utilities to pass through their stranded-like costs in the fall of 2000 and may have greatly diminished the effect of the supply shortage.²¹⁵ Order 888 *et seq.*, showcased regulators' concern for the financial integrity of utilities and their commitment to applying cost causation principles in cost recovery, and Order 888 *et seq.* made allowances for prudently incurred

Order 636-C, *supra* note 87, at 10,213 (allowing firms to presume that their costs were prudent in exchange for agreeing to absorb some of the stranded costs).

210. *Sæ, e.g.*, 16 U.S.C. § 824e(a) (2000) (allowing the Commission to adjust and correct retail electricity rates that the Commission, upon motion by the parties, finds to be "unduly discriminatory or preferential").

211. *Sæ* Fed. Power Comm'n v. Hope Natural Gas Co., 320 U.S. 591, 601 (1944) (holding that the method of allocating costs is not critical so long as the end result is a just and reasonable rate).

212. *Sæ id.* at 600-01 (stating that while Congress has not provided a formula as to how to determine what a "just and reasonable" rate is, FERC can use its discretion to determine what rate would deliver an equitable and "fair value" to the public).

213. *Sæ* Electricity Utility Industry Restructuring Act of 1996, CAL. PUB. UTIL. CODE § 367 (West Supp. 2001) (requiring firms to ensure that their costs are minimal so that unnecessary costs are not passed on to retail consumers). Additionally, by passing California Assembly Bill 1X, in an attempt to avoid rate increases, the California legislature spared ratepayers as the state essentially ended up subsidizing the utilities. *Id.*

214. *Sæ* S. Cal. Edison Co., Cal. Pub. Util. Comm'n Decision 01-05-064, Application No. 00-11-038 (May 15, 2001) (describing the tiered billing system and illustrating the system's disproportionate burden on businesses). CPUC explained that the new billing system was tiered, and therefore, most residential and small business customers would remain unaffected by the new billing system. *Id.*

215. *Sæ supra* Part I.B.3 (discussing the stranded costs and solutions implemented by Order 888 when the wholesale electricity market was deregulated).

stranded costs without requiring them to be used and useful.²¹⁶

If regulators had effectively continued Order 888's policy of passing costs through to exiting customers, then these consumers' bills would have increased, and simultaneously, would have triggered increased demand-side management ("DSM") efforts.²¹⁷ DSM would have shifted into high gear and decreased demand, thus stabilizing wholesale prices until more generating plants were brought online.²¹⁸ At the same time, if regulators had continued with Order 888's cost recovery method, regulators most likely would have listened more intently to the utilities' financial arguments, as those arguments carried great weight during wholesale electricity deregulation.²¹⁹

However, the principle of cost causation would not have been properly applied had the imposed price caps remained intact. Regulators should have removed these caps to allow pure cost causation to function, thus passing the outstanding costs to exiting customers—any other action would counteract the goal of full cost recovery for prudently incurred costs.²²⁰ Additionally, removing the price caps would only affect customers who initially choose to change service providers.²²¹ This action would have required regulators to take an "active" role, which historically, regulators have not done.²²²

216. See, e.g., Order 888-A, *supra* note 189, at 12,389 (noting that the direct assignment of stranded costs to exiting customers "is the preferable approach for both legal and policy reasons"). The utilities only had to prove that the costs were legitimately prudent and that the utilities had a "reasonable opportunity" to recover those costs. *Id.* at 12,391.

217. See CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 23 (discussing the effects of electricity conservation which is a demand-side management method that would have been utilized to try to curb costs if regulators had continued to use the pass-through cost policy). Demand-side management is where electricity costs are contained on the demand side of the supply-demand economic formula—e.g. by cutting the amount electricity needed or conserving electricity. *Id.*

218. See *id.* (noting that consumers have historically lowered their energy consumption when energy prices have increased).

219. Opponents of this policy hold that it is not critical that the utilities' recover their costs because the state will always, in cases of emergency, keep the utilities serving the public. Alfred E. Kahn, *Can Regulation and Competition Coexist? Solutions to the Stranded Cost Problem and Other Conundra*, 7 *ELECTRICITY J.* 8, 23 (1994); see also James L. Plummer, *Bypass Concepts and Transmission Access*, in *COMPETITION IN ELECTRICITY: NEW MARKETS AND NEW STRUCTURES* 61, 66 (James L. Plummer & Susan Troppmann eds., 1990) (opposing the need to consider the financial viability of the utilities because of the states' protection of the public at times of emergency). See generally Elizabeth A. Nowicki, *Denial of Regulatory Assistance in Stranded Cost Recovery in a Deregulated Electricity Industry*, 32 *LOY. L.A. L. REV.* 431 (1999) (discussing the benefits of denying stranded cost recovery).

220. See CAMBRIDGE ENERGY RESEARCH ASSOCIATES, *supra* note 27, at 17-18 (noting that the price caps in California will have negative effects on the market's recovery, preventing the costs from being fully passed on to departing customers).

221. See Order 888-A, *supra* note 189, at 12,374 (noting FERC's policy of only passing cost through to the responsible, or exiting, customers).

222. See Michael Asimow et al., *Conference: Harvard Electricity Policy Group: Regulatory*

CONCLUSION

In the aftermath of the peak of California's electricity crisis, FERC, the CPUC, and the California government have allowed wholesale price gauging and market power to run rampant in California, instead of heeding economists' warnings.²²³ Additionally, when faced with the question: "Who should pay?,"²²⁴ regulators should have taken a more refined look at the nature and quality of California's newest stranded costs and acted more prudently.²²⁵ As noted, the recent electricity market distortion mirrors the industry's deregulation by AB 1890 in 1996, and should have been treated in a similar manner.²²⁶

FERC has failed to allow the full recovery of most costs from consumers despite the stranded-like nature of these costs.²²⁷ Had regulators closely examined the newest costs, regulators would not have missed the costs' distinct properties, which are reminiscent of the stranded costs that arose from cancelled nuclear power plants, natural gas deregulation, and electricity deregulation.²²⁸ In addition, regulators should have realized the inconsistencies in the make-up of their electricity cost recovery policies.²²⁹

Decisionmaking Reform, 8 ADMIN. L.J. AM U. 789, 906 (1995) (noting that regulators need to do more than simply give a "thumbs up" or "thumbs down" on rate proposals). Regulators need to develop some foresight and pro-activity, rather than examining the justness and reasonableness of past activities. *Id.* This would allow them to anticipate and thus diminish future difficulties. *See id.* at 896 (arguing that utilities' customers prefer fair prices and that regulatory limits do not give utilities a chance to deliver fair prices, but require more involvement from regulators).

223. *See* PULLER, *supra* note 24, at 843 (illustrating that California's electricity market was so rigidly structured that the recent irregularities and shifts in the supply and demand continuums were inevitable).

224. *See* Baumol & Sidak, *supra* note 206, at 843 (asserting that the stranded cost recovery issue raises questions of fairness when assessing who should bear the burden of high costs).

225. *See supra* Part III.A (describing the similarities between these new stranded costs and the traditional stranded costs with which regulators are familiar).

226. *See, e.g.,* Joskow & Kahn, *supra* note 122, at 22-34 (presenting evidence that the costs spikes were not only caused by changing government policies, but also by exogenous market events). *But see* McArthur, *supra* note 34, at 848 (criticizing full stranded cost recovery in the electricity industry and pointing out that it is based on the flawed premise that a regulatory contract exists between utilities and retail customers).

227. *But see generally* McArthur, *supra* note 24, at 73-74 (discussing FERC's treatment of the California electricity crisis, how its treatment mirrors policies established under deregulation Order 888, and how FERC's treatment of the electricity crisis was not consistent with the stranded cost recovery policies that FERC established with the natural gas industry).

228. *See* Rogers & Gray, *supra* note 37, at 447 (summarizing actions taken by state public utilities commissions ("PUCs") in analyzing and solving the cancelled plant cost problem).

229. *See* McArthur, *supra* note 24, at 120 (stating that there is no clear, relevant difference between deregulation in natural gas and in electricity, in spite of FERC's

This Comment recommends that FERC and CPUC reform their electricity cost recovery policies, especially in light of the similarities between the latest costs and those faced during wholesale electricity deregulation in the 1990s. This reform could be achieved by the Commissions by employing a consistent policy when allocating outstanding costs and by including a picture of the future in the Commissions' considerations.²³⁰

claims that they justify different treatment).

230. See George K. Miller, *Emerging Market Going Prins: Lessons of the California Power Crisis*, 24 *FORDHAM INT'L L.J.* 1264, 1265 (2001) ("We must find ways of protecting captive customers that do not involve either suppressing competition in markets where that is feasible or handicapping their supplies in responding to it." (quoting Alfred E. Kahn)); see also Kosh, *supra* note 82, at 639 (stating that ratepayers bear all costs in the long run).