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ENERGIZING AMERICA: A BLUEPRINT FOR DEREGULATING THE ELECTRICITY MARKET

America's electricity market is massive. Its total assets are worth approximately $500 billion and it has revenues of over $200 billion annually. The size of this market is not surprising, considering that almost every American is a consumer of electricity. Unfortunately, despite the fact that millions purchase and use electricity, few have a true choice in deciding from whom they will receive their service. And a confusing set of outdated, inefficient, and overlapping laws and regulations continue to govern the electricity industry at the federal, state, and local levels.

Throughout this century, regulators have been conducting an experiment in America's electricity market that can be judged only as a failure. A lack of price competition and consumer choices, limited innovations, and a lackluster environmental record are some of the deleterious side effects of the current regulated monopolistic system. Consumers and the industry itself stand to benefit in important ways, however, once choice and free-market principles are substituted for the unsuccessful command-and-control methods of a regulated monopoly model. Kenneth Costello and Robert Graniere of the National Regulatory Research Institute (established by the National Association of Regulatory Utility Commissioners) have argued that the deregulation of industries in general has been beneficial:

A glossary of key electricity terms can be found on page 34.

> The more scholarly studies have shown that deregulation has generally been a success story. Consumers have benefited greatly and the overall efficiency of the deregulated industries has improved greatly as well. Firms in these industries have reduced their costs, lowered their prices, introduced new services and reconfigured old services to better

accommodate consumer preferences, and deployed new technologies and practices.[1]

Just as consumers, shareholders, and industry have benefited from deregulatory initiatives in aviation, natural gas, telecommunications, and transportation, the deregulation of the electricity marketplace promises similarly rich rewards.

The Benefits of Deregulating the Market

The benefits of deregulating the electricity market fall into the following seven principal areas:

- Increased competition
- Lower prices
- Lower operating costs for businesses
- Lower regional cost differences
- More jobs
- Increased reliability of service
- A cleaner environment

First, deregulating the electricity market will create **a level playing field** for future rivalry and competition in the industry, ensuring that all companies have an equal chance to provide service to consumers. No longer will regulators determine which firms will be granted exclusive franchising arrangements. Furthermore, incumbent firms no longer will have their market turf protected through generous returns on their investment, which were guaranteed by regulatory fiat. In other words, deregulation means consumers, in free-market fashion, will call the shots in the electricity market, not regulators. Jonathan Marshall, an economics/energy reporter for the *San Francisco Chronicle,* wrote that "High-voltage transmission lines, veritable electron superhighways, carry power thousands of miles with low losses, expanding the scope of regional markets. With more computer power and intelligent metering, nothing stands in the way of extending retail competition down to the household level."[2]

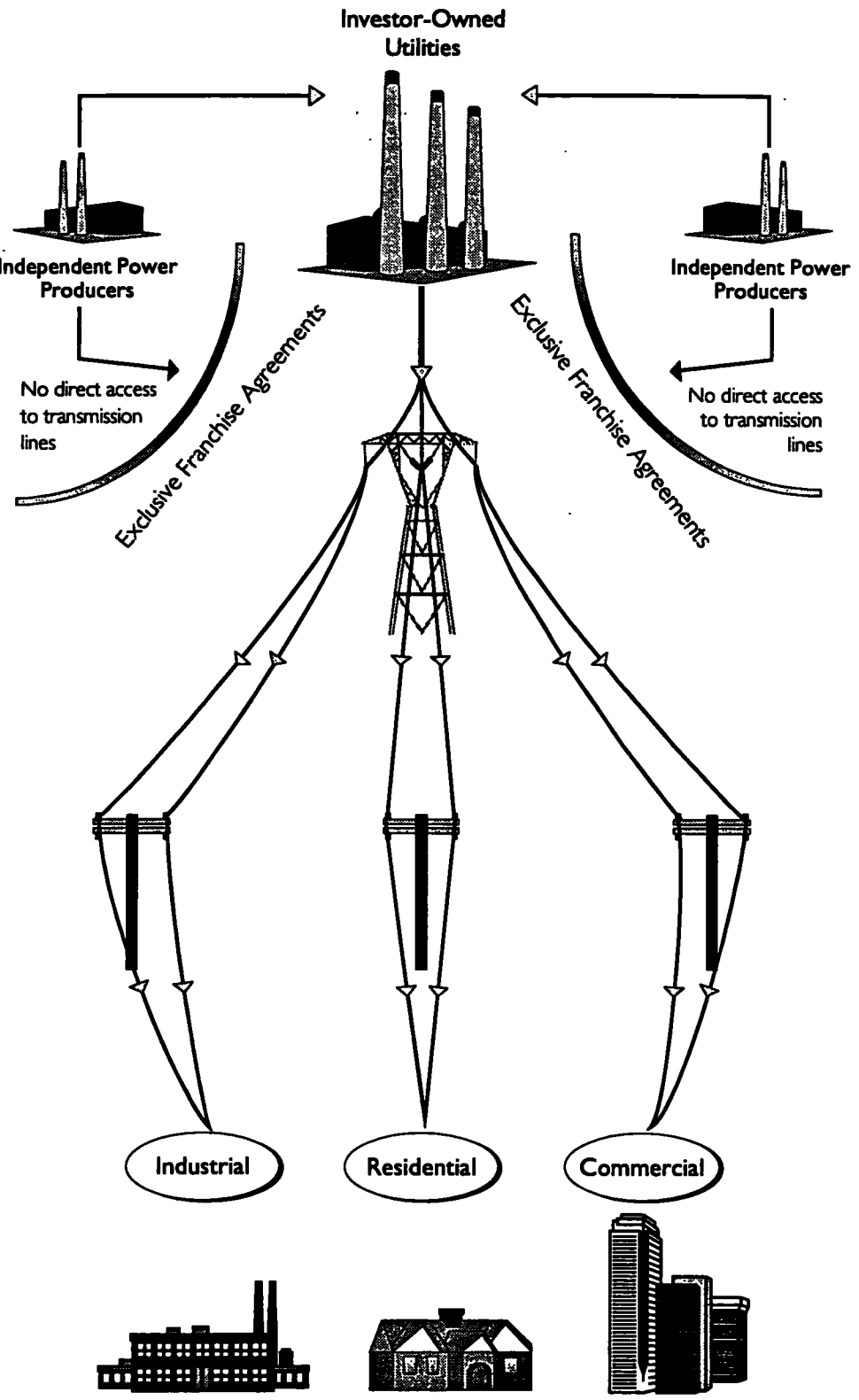
Second, deregulation will **lower prices,** which will empower residential consumers by letting them choose their own electricity supplier to find the best service. The current

1 Kenneth Costello and Robert Graniere, "The Deregulation Experience: Lessons for the Electric Power Industry," National Regulatory Research Institute, August 1996. Costello and Graniere went on to say: "Further, distributional effects have not been dramatic... shareholders have not gotten rich at the expense of consumers. In fact, in most instances, consumers have gained much more from deregulation than shareholders. Yet, shareholders have been able to earn adequate rates of return, attributed in part to the greater freedoms firms have enjoyed since deregulation." Other experts also argue that past deregulatory experiments in other fields foreshadow the beneficial changes reform could bring to the electricity market. See Kennedy Maize, "Competition Works—Even for Us Puppies," *The Electricity Daily,* Vol. 7, No. 102 (November 25, 1996), p. 3; Jerry Ellig, "Regulatory Reform in Electricity: Precedent from Other Industries," George Mason University Center for the Study of Market Processes *Working Papers in Public Policy,* 1996.

2 Jonathan Marshall, "Competition Comes to the Electron Superhighway," *The American Enterprise,* May/June 1995, p. 84.

Chart 1

Current Structure of the Electric Industry



regulatory system forces consumers to bear very high costs. An important study by Clemson University professors Michael T. Maloney, Robert E. McCormick, and Robert D. Sauer for Citizens for a Sound Economy, a Washington-based think tank, revealed that in the long run the average monthly electricity bill of $69 for a typical residential customer could fall by approximately $30—a decline of 43 percent—if consumers had a real choice in who served them.[3] Short-run savings also would be significant. The authors estimated an average drop of $18 for those with an average monthly bill of $69. Overall, the study reported that consumers would save almost $107.6 billion annually if a truly competitive market were developed.[4]

Such cost savings would come not only from direct competition as new firms enter the market, but also from the higher quality of service that this competition will foster. Wake Forest University professor of economics John C. Moorhouse observed that "[T]he variety of generating equipment and the large number of independent producers adds diversity to the system, lowering the probability of widespread equipment failure, and, thereby, reducing the amount of excess capacity required to provide a given level of service reliability."[5] Moorhouse has argued that competition will mean a broadening of choices for electricity consumers and an overall increase in innovation within the industry. "Under competitive electricity generation, the market will provide an array of service standards that more closely match the mosaic of consumer preferences."[6] Furthermore,

> Competition not only leads firms to be more responsive to consumer demands, monitor costs more closely, and compete on the basis of price, it provides an incentive to be innovative because that may be the only way to get a temporary jump on rivals. Developing a new consumer service, a better method of reducing costs, or a faster way of dealing with problems promises the innovator a competitive edge.[7]

Third, deregulation will generate **lower prices for commercial businesses**, especially small businesses. Electricity usually represents a substantial portion of the overhead cost of doing business. Unfortunately, these costs do not disappear during the production process and are not freely absorbed. They are factored into the final cost of goods and services. Therefore, because businesses cannot shop for better electricity bargains, higher electricity prices are passed on to the customer. According to the Food Marketing Institute, in 1994 grocery stores spent approximately 4 percent of their net sales on electricity expenses. Roughly $700 of the sticker price of every new General Motors automobile purchased in the United States is attributable to electricity expenses.[8] Such "pass-through" costs, which ultimately raise the prices consumers pay for goods and services, could be reduced significantly if America's corporate sector could shop for competitively priced electricity.

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3 Michael T. Maloney, Robert E. McCormick, and Robert D. Sauer, *Customer Choice, Customer Value: An Analysis of Retail Competition in America's Electric Industry* (Washington, D.C.: Citizens for a Sound Economy Foundation, 1996), pp. ix-x.

4 *Ibid.*

5 John C. Moorhouse, "Competitive Markets for Electricity Generation," *Cato Journal*, Vol. 14, No. 3 (Winter 1995), p. 430.

6 *Ibid.*

7 *Ibid.*, p. 432.

8 G. Stein, "Competitive Electricity," presentation at ELCON 1993 Annual Seminar, Washington, D.C., October 14, 1993.

Moreover, although opponents of change may argue that only the large corporate users of electricity want reform, in reality it is the small business that stands to benefit most. Electricity bills can represent a much greater burden as a percentage of overall costs for a small business, especially a retail business with a low margin of profit.

Fourth, deregulation will **equalize unjustifiable regional differences** in electricity prices. Wayne Crews, an economist with the Washington-based Competitive Enterprise Institute, noted that although the average price of electricity in the United States is about 7 cents per kilowatt-hour (kWh), this price varies widely from state to state, from roughly 5 cents to as much as 10 cents per kWh. Crews argues, therefore, that there are "extraordinary inefficiencies. If customers could bypass their local utilities and gain access to power generators located elsewhere, billions could be saved." Consequently, he notes, "A mere one cent per kWh drop in the average cost of 7 cents would save industrial, commercial, and residential customers $28 billion per year."[9]

Luckily, a number of state initiatives are under way around the country that foreshadow the benefits to come under nationwide deregulation. New Hampshire instituted a pilot project in electricity competition in May 1996 that allowed an unlimited number of companies to enter a small portion of the market to serve customers. Many companies involved in the New Hampshire experiment offered unique billing incentives and programs to encourage customers to switch providers, including free bird feeders and the opportunity to dedicate a certain portion of their monthly bills to an environmental group or program of their choice. Illinois, Massachusetts, and New York also have initiated successful pilot projects.

These pilot programs have proved two important points. First, many companies exist that desire to serve customers in this field, and many more are likely to emerge if open entry is allowed. Just as the long-distance telephone market flourished once rivals had access to networks, these state-by-state experiments illustrate the desire of electricity entrepreneurs to offer new and innovative services directly to customers. Second, electricity consumers of all kinds can expect savings if the market is deregulated. The Illinois program has yielded average savings of 15 to 20 percent for residential customers, 20 to 25 percent for small businesses, and 25 to 35 percent for large commercial customers.[10] The New Hampshire experiment has resulted in savings of 15 to 20 percent for non-industrial customers and 20 to 30 percent for industrial customers. Similar savings have been forthcoming in the New York and Massachusetts pilot programs.

Fifth, deregulation can **increase jobs** and benefit local communities. Some of the large monopolistic utilities that do not want consumers to have the opportunity to choose alternative providers have used scare tactics, intense lobbying, lavish campaign donations, and outright deception to convince their local communities that deregulation will cost them in jobs. Nothing could be further from the truth. Most of the large workforce cutbacks these firms warn may happen under deregulation have taken place already as a natural reaction to downsizing in this industry in general. If anything, competition is

9 Clyde Wayne Crews, "Ending the Electricity Monopoly," *The Journal of Commerce*, September 1, 1995.

10 "Preliminary Results of Pilot Programs in Illinois, New Hampshire, New York, and Massachusetts," ELCON report based on data from the Wheeled Electric Power Company, November 1996.

likely to increase employment in the industry as new firms enter the market or existing firms look to innovate in the face of increased rivalry.

Sixth, deregulation will **increase service reliability.** Increased innovation by competing suppliers is also likely to bolster service reliability as utility firms realize their profits and markets are no longer protected. Under the regulated monopoly model, consumers are not able to switch to a new provider if their current provider proves unreliable. But under competitive conditions, service failures will be met with consumer rebellion and, consequently, a loss of profit. Nothing can strengthen the incentive to maintain high service standards more than this.

The occasional claims that competition is already stretching the limits of the current networks' reliability and may cause major outages are patently obvious scare tactics used by the proponents of the status quo to derail reform legislation. Just as deregulation and competition in other industries have resulted in improved safety and reliability, so too will electricity markets benefit when liberalization occurs.

Finally, deregulation can **benefit the environment.** In empowering consumers to be smarter, more demanding shoppers, deregulation forces power companies to meet higher standards of efficiency and cleanliness to ensure that the local communities are provided the power they want without increased pollution or other negative side effects. Competition breeds innovative solutions and alternatives to less efficient production methods in use today, which can only benefit the environment in the long run.

The Key Principles for Reform

In recognizing the benefits of a reformed and restructured electricity market, a handful of deregulation bills were introduced during the 104th Congress. These bills may foreshadow the debate that will take place in the new session of Congress, as the authors of a 1993 study for Coopers & Lybrand L.L.P. have noted:

> The argument within the industry and regulatory circles is no longer whether there will be increased competition but how that increase should be managed, what role regulators should play and how transition costs can be smoothly and fairly apportioned....[11]

In other words, although everyone may purport to champion the cause of deregulation, what really matters in the liberalization process is how to get from point A to point B. The major electricity deregulation bills introduced during the 104th Congress addressed this important question in markedly different ways. As the 105th Congress begins this process anew, legislators should keep eight important principles and strategies in mind to ensure a comprehensive deregulation of the electricity market:

1. **Immediately eliminate** all barriers to entry in the market.

2. **De-monopolize** the industry through divestiture or open access.

3. **Enact** clear guidelines governing stranded cost recovery.

11 Philip O'Connor, Terrence Barnich, and Craig Clausen, *Progressive Choice: The Customer as Regulator* (Philadelphia: Coopers & Lybrand L.L.P., 1993), p. 2.

4. **Privatize** the federal Power Marketing Administrations and the Tennessee Valley Authority, and close the Rural Utilities Service.

5. **Do not mandate** private sector use of alternative energy sources.

6. **Avoid** new mandates, exclusions, and pork-barrel spending.

7. **Avoid** costly new federal universal service mandates.

8. **Establish** a timetable to abolish the Federal Energy Regulatory Commission and the Department of Energy.

These principles form the foundation of effective electricity regulatory policy that will enhance the beneficial transition from government regulation to market competition. Congress should:

1. **Eliminate barriers to entry that impose a constitutionally impermissible burden on commerce and competition within the electricity sector.** This is an important first step toward the creation of a free market in electricity. Such barriers include the Federal Power Act and the Public Utility Holding Company Act of 1935 (PUHCA), which federalized numerous responsibilities regarding electric holding company management. These should be repealed. Beyond these statues, almost all previous Federal Energy Regulatory Commission (FERC) orders must be overturned and other, more recent, statutes must be superseded by a more deregulatory-minded strategy. All regulations involving rate setting or price controls must end as companies enter a competitive market. Finally, exclusive state franchising must end and the "state action doctrine," which allows states to ignore federal antitrust laws and establish state-sanctioned monopolies, must be put to bed forever.

2. **De-monopolize the industry through divestiture or an open access policy.** Tearing down the old laws will not prove to be thorough enough. Policymakers must devise methods to enable electricity consumers to choose their own service providers in a truly free market situation. The two models for achieving this are divestiture and open access. **Divestiture,** or mandatory vertical disaggregation, would separate generation facilities from transmission/distribution facilities. It is probably the easiest deregulatory path to follow. Incumbent utilities currently holding both generation and transmission/distribution facilities would be required to sell one side of their business to ensure that monopolistic vertical integration of the industry came to an end. This immediately would open transmission/distribution facilities to competition and thereby guarantee to consumers a choice in providers. A less controversial but more difficult deregulatory strategy to implement is that of **open access.** Like vertical disaggregation, open access would ensure consumer choice by requiring vertically integrated utilities to open transmission/distribution facilities to rivals to give competitors direct access to customers. Although this pro-competitive policy certainly would offer choice in providers, it also would require ongoing regulatory oversight to ensure that rivals were granted access to existing networks on non-discriminatory terms. Continuous legal squabbles and court battles are likely under such an approach.

3. **Place clearer guidelines in legislation governing stranded cost recovery. Do not allow states to use this process to hinder interstate commerce by favoring incumbent producers.** Perhaps the most contentious issue in the debate of electric-

ity deregulation is that of stranded costs—business investments that may be rendered obsolete by the rise of competition. Large regulated monopoly utilities claim that in allowing rivals to enter the market, policymakers will force incumbent utilities to bear the full burden of investments that have been made to serve customers in the past, many of which were demanded by regulators. Although the merits of stranded investments are often questionable, some are legitimate. Federal policy makers should let state and local governments make the compensatory determinations because those officials are most likely to have required the majority of such investments in the first place. Minimal federal guidelines may be needed to prevent "bad actor" states from using the process to discriminate against new rival producers, forcing them to incur outrageously excessive costs for compensation of stranded cost incurred by the incumbent utilities. This would serve as a barrier to entry and it would diminish the beneficial effects of other deregulatory efforts.

4. **Privatize the federal Power Marketing Administrations and the Tennessee Valley Authority, and close down the Rural Utilities Service.** The federal government operates four Power Marketing Administrations (PMAs) to sell electricity generated by dams maintained by the Army Corps of Engineers and the Bureau of Reclamation. It also operates the Tennessee Valley Authority (TVA) and the Rural Electrification Administration (REA), now known as the Rural Utilities Service (RUS). PMAs sell a sizable percentage of electricity each year, which begs the question of why the federal government remains in this business when its facilities could be run privately for profit. Congress recently put in place a plan to sell the Alaska Power Marketing Administration. Federal assistance to PMAs should end and the PMAs should be privatized before the turn of the century. This would result in significant budgetary savings between $15 billion and $30 billion.

5. **Do not mandate the use of any particular source of energy, including renewable energy.** Beginning with the energy crisis of the 1970s, the federal government has been searching for alternative energy sources to help lessen America's dependence on fossil fuels, specifically oil. Unfortunately, this search led to a series of misguided federal investments and mandates on the private sector to force greater reliance on solar, wind, hydrothermal, synthetic fuels, and other alternative energy sources. These investments have proved too costly to continue or have failed to produce any hopeful signs that alternative energy and fuels can satisfy consumer demand successfully. Although policymakers seem willing to abandon failed federal energy programs when the price tag grows too large, many legislators continue to push for private sector mandates that require greater dependence on alternative or renewable energy sources. This is a mistake. Competitive markets, not more mandates, are the best way to encourage greater energy efficiency and the growth of alternative fuel sources.

6. **Avoid including new mandates, exclusions, or pork-barrel spending in final legislation.** Deregulation legislation should not become a vehicle for other forms of pork-barrel spending or for new mandates on the private sector. Calls for the funding of new energy research and development programs or to mandate that electric companies devise special programs and rates for certain consumers should be ignored. Such meddling is not needed in a competitive free market. More important, legislators should not fall into the trap of allowing exclusions and carve-outs to be inserted into deregulation legislation because this will lead to calls for preferential

treatment in the process by affected parties. All entities affected by the deregulatory process should be required to abide by the same laws to ensure the creation of a truly level playing field.

7. **Avoid costly new federal universal service mandates or programs; leave such concerns to the states.** During the 1996 telecommunications debate, universal service was one of the foremost topics. Although Congress is understandably concerned that all U.S. households are served by modern utility networks, creating massive new spending programs or imposing federal universal service mandates to achieve this goal will be counterproductive. Complex subsidy mechanisms and pricing regulations only add burdensome new rules and regulations as Congress looks to repeal old ones. Furthermore, any assistance that is deemed necessary should not be administered at the federal level. The states and localities are in a better position to gauge and deliver assistance to those truly in need. If legislators insist on extending aid to individuals, it should be targeted through strict means-testing and delivered through a pro-competitive mechanism such as vouchers.

8. **Establish a timetable to abolish the Federal Energy Regulatory Commission (FERC) and the Department of Energy (DOE).** Once competition comes to the electric world, federal regulation of the electricity marketplace can end. Abolition of the FERC and DOE should be vital components of any deregulatory plan because liberalization will not be completed until federal oversight ends. Any important regulatory functions that remain can be turned over to the states eventually or sunset on a specified schedule.

Without considering and embodying all of these principles, Congress will be unable to pass effective legislation to deregulate the electricity market. And deregulation is desperately needed.

Reform of the electricity market will be the most important economic deregulation initiative taken up by Congress for the rest of the decade. If true comprehensive reforms are instituted, their effects will be felt well into the next century in the form of greater technological innovation, expanded economic output, and significant consumer savings.

"The technical and economic knowledge exist to permit the substitution of market competition for state ownership or government regulation in the electricity generation industry," according to economist John Moorhouse from Wake Forest University.[12] Congress must take the necessary steps to ensure this beneficial transition occurs immediately and without unnecessary encumbrance. Loading the legislation with payoffs to well-heeled special interests and favored constituents will not help this effort in the long run. A clean break with the past must occur that severs all ties to the regulated monopoly model of this industry.

12 Moorhouse, "Competitive Markets for Electricity Generation," p. 438.

HOW REGULATION SHORT-CIRCUITED THE ELECTRICITY MARKET

Natural Monopoly or Competitive Industry?

Although it is popular for analysts to speak of the electricity industry as a natural monopoly, even a brief review of the development of the industry will lead to the opposite conclusion. Industry historian Robert L. Bradley, Jr., president of the Houston-based Institute for Energy Research, has noted, "The opening era of the electric industry was characterized by competing franchises and 'regulation by competition.'"[13] In other words, rivalry, not regulation, protected consumers. In fact, as economist Burton N. Behling noted in 1938, "There is scarcely a city in the country that has not experienced competition in one or more of the utility industries."[14] Behling noted that six electrical companies were organized in 1887 to serve New York City and five companies vied for customer loyalty in Chicago in 1907. Smaller cities also saw competitors rise up to serve their citizens. Duluth, Minnesota, was served by five electrical companies in 1895, and Scranton, Pennsylvania, was served by four firms in 1906.[15]

The result of this free market experience, which lasted from 1882 to 1907, was, in Bradley's words, "very positive for consumers.... [T]he quantity [of electricity] supplied was rapidly increasing from technological advances and expanding affordability, and prices were falling from declining costs and open competition."[16] This era also saw a staggering increase in generation capacity and overall production capability. As Bradley aptly noted, "This expansion rate, which would not be subsequently equaled, hardly suggests the 'monopolistic' practice of restricting output to maintain or increase prices."[17]

This evidence strongly suggests that the electric industry was never a natural monopoly. Technically, a natural monopoly exists when a single firm can produce the entire amount of output demanded by consumers at a lower cost than multiple suppliers might provide; yet, as Bradley notes, when multiple competitors served customers during this period, costs and prices were falling. Some economists argue that the electric market is a natural monopoly because of the nature of the transmission and distribution facilities required to deliver power to consumers. Because there are substantial costs associated with the construction of independent transmission facilities, some economists have postulated that it might be more efficient if a single firm built and controlled the entire transmission network; it would be inefficient to duplicate these expensive existing facilities. The evidence illustrates, however, that this is only conjecture; many firms during this period sought to build independent, competing infrastructures and did so while turning a profit.

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13 Robert L. Bradley, Jr., "The Origins of Political Electricity: Market Failure of Political Opportunism?" *Energy Law Journal*, Vol. 17, No. 1 (1996), p. 60.

14 Burton N. Behling, *Competition and Monopoly in Public Utility Industries*, (Urbana, IL: University of Illinois Press, 1938), p. 19.

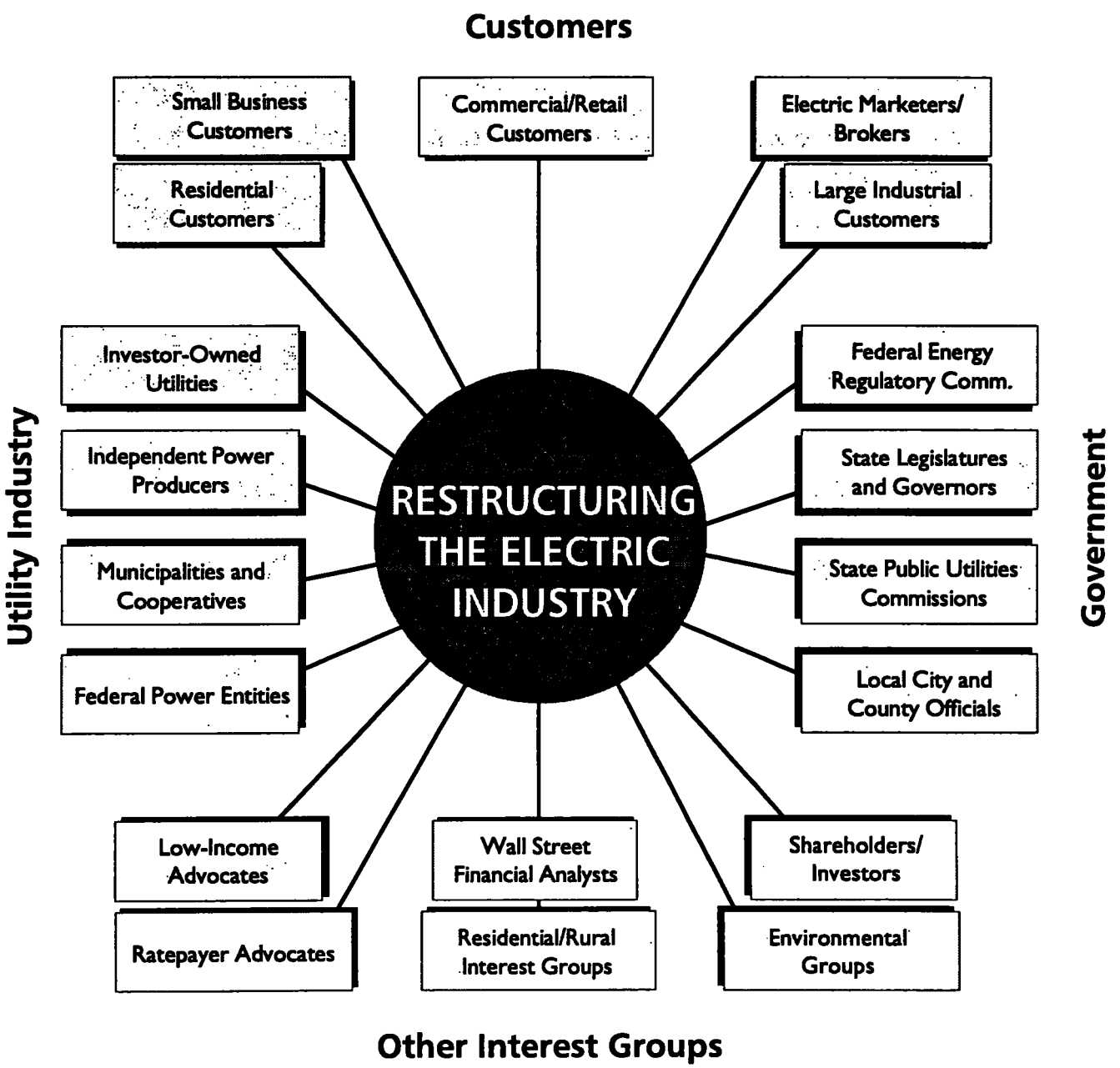
15 *Ibid.*

16 Bradley, "The Origins of Political Electricity," p. 60.

17 *Ibid.*, pp. 60-61.

Chart 2

The Diverse Interests Involved in the Restructuring of the Electric Industry



The Rise of Public Utility Commissions and Public Monopoly

Real monopolies eventually developed within the electric market for reasons that had little to do with the operation of the free market. Large incumbent electric firms, primarily led by the head of the Chicago Edison Company, Samuel Insull, set out to solidify their market share and power in the early years of this century by effectively excluding the entry of new rivals. "New entry and price wars from entry were continually making life difficult for the incumbent firms," according to historian Bradley.[18] Therefore, instead of beating back rivalry by cutting prices or expanding consumer options, the large incumbent electricity producers concocted "natural monopoly" theories to justify intervention by state regulatory bodies—commonly referred to as public utility commissions (PUCs). As Bradley states, "'Natural monopoly' was not natural, and a political monopoly was sought instead."[19] Thus, state regulatory commissions were born and given the power to establish exclusive monopolistic service areas, or franchises, for these incumbent firms and to regulate the rates and quality of service.[20] In essence, the PUCs required electric companies to serve a given area at a given price, but simultaneously guaranteed that these companies would receive stable and, in many cases, very generous profits, and freedom from the threat of rivals' competitive entry.

Although this model of regulation was undertaken in the name of consumer protection and the "public interest," in hindsight it is obvious it had more to do with the protection of producers from competition and, as a consequence, did little to benefit consumers. "[S]tate regulation of electric utilities was primarily a pro-producer policy," economist Gregg A. Jarrell noted in a 1978 article describing how and why state regulation of the electric market developed.[21] In his seminal piece, Jarrell reveals that those states that

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18 *Ibid.*, p. 69.

19 *Ibid.* The validity of the natural monopoly theory has been questioned by numerous economists and historians. As economist James R. Nelson noted in 1966, "One of the most unfortunate phrases ever introduced into law or economics was the phrase 'natural monopoly.' Every monopoly is a product of public policy. No present monopoly, public or private, can be traced back through history in a pure form. '[N]atural monopolies' in fact originated in response to a belief that some goal, or goals, of public policy would be advanced by encouraging or permitting a monopoly to be formed, and discouraging or forbidding future competition with this monopoly." James R. Nelson, "The Role of Competition in Regulated Industries," *The Antitrust Bulletin*, Vol. 11, No. 1 & 2 (1966), p. 3. Thomas Hazlett, professor of economics at the University of California-Davis, has argued: "The economists' analysis of the inefficiency of unregulated natural monopoly markets did not spring from a scientific or particularly scholarly research program but in response to 'a growing clamor for more government.' Indeed many of the early natural monopoly writers had attacked the problem because of personal ideological agendas; their politics preceded their studies." Thomas Hazlett, "The Curious Evolution of Natural Monopoly Theory," in *Unnatural Monopolies: The Case for Deregulating Public Utilities*, ed. Robert W. Poole, Jr. (Lexington, Mass.: Lexington Books, 1985), p. 21. Also see Harold Demsetz, "Why Regulate Utilities?" *Journal of Law and Economics*, Vol. 11 (April 1968), pp. 55-65.

20 Although Massachusetts was the first state to establish a state regulatory commission in 1887, not until 1905 (New York) and 1907 (Wisconsin) was the modern incarnation of the state regulatory commission born. The charters of these bodies (especially the Wisconsin PUC) would provide the model for states across the nation because almost all states creating PUCs after 1907 endowed them with similar powers: the right to require "certificates of convenience and necessity" or operating permits for all new utilities to initiate service; the authority to regulate the rates of service; and the power to control the issuance of securities by regulated public utilities. See Gregg A. Jarrell, "The Demand for State Regulation of the Electric Utility Industry," *The Journal of Law and Economics*, Vol. 21, No. 2 (October 1978), pp. 270-71. Thus, 1905 makes the beginning of the era of state regulatory commission management of the electric industry.

21 *Ibid.*, p. 293.

were among the first to institute state regulatory commissions did not exhibit higher prices, restricted output, and exorbitant corporate profits like natural monopoly theorists have suggested. In fact, exactly the opposite was the case. Utility companies in the states that created the earliest PUCs "had 46 percent lower prices, 38 percent lower gross profits, and 23 percent higher output than did utilities in later-regulated states.... These empirical results are difficult to square with the traditional explanation that state regulation was designed to minimize the undesirable social consequences of a naturally monopolistic electric industry."[22]

Jarrell's findings prove that something besides an uncompetitive naturally monopolistic marketplace drove policymakers and large utility companies to agree to establish the regulatory regimes in the early years of this century. And what drove the creation of state commission regulation was vigorous competition, not the lack thereof. This led Jarrell to conclude appropriately, "[S]tate regulation potentially had much to offer public utilities. The electric utility interests were not acting suicidally when, around 1910, they became the main champions of the movement for state regulation."[23]

History has shown that competition is not only possible, it has been a better servant of the consumer; yet it met its demise in the electricity market as PUCs began popping up in state after state at the behest of large utility companies. Thought to be less susceptible to political corruptibility than municipal legislators, PUCs were viewed as scientific regulators that could micromanage successfully the day-to-day operations of a highly technical industry. It quickly became apparent, however, that PUCs were just as easily controlled by those they regulated because they had to rely on those entities to carry out their policy goals.[24]

This fact should not be surprising. Noted regulatory economist Alfred E. Kahn argued in 1971:

> When a commission is responsible for the performance of an industry, it is under never completely escapable pressure to protect the health of the companies it regulates, to assure a desirable performance by relying on those monopolistic chosen instruments and its own controls rather than on the unplanned and unplannable forces of competition.[25]

Furthermore, Kahn notes, "Responsible for the continued provision and improvement of service, [the regulatory commission] comes increasingly and understandably to identify the interest of the public with that of the existing companies on whom it must rely to deliver goods."[26]

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22 *Ibid.*, pp. 292-293.

23 *Ibid.*, pp. 294-295.

24 For conclusive proof of PUC efforts to suppress competition, see Walter J. Primeaux, Jr., "Total Deregulation of Electric Utilities: A Viable Policy Choice," in *Unnatural Monopolies: The Case for Deregulating Public Utilities*, ed. Robert W. Poole, Jr. (Lexington, Mass.: Lexington Books, 1985), pp. 121-152. Primeaux argues, "Public utility commissions are powerful influences, and empirical data show that their hostility toward direct competition tends to undermine its continued existence in actual markets." He notes that the great majority of PUCs he surveyed in the 1970s had explicit policies either forbidding or discouraging competition.

25 Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions*, Vol. 2: Institutional Issues (Cambridge, Mass.: The MIT Press, 1971, 1991), p. 12.

The Advent of Federal Intervention. As the industry matured, complex corporate holding structures developed that allowed many utilities to become national in scope. Most large electric utilities had become completely vertically integrated—single companies controlled not only the bulk of the generation facilities, but also the transmission and distribution lines that represented the only link to final customers. The resulting development of a complex, vertically integrated interstate electricity marketplace meant states no longer had clear jurisdiction over these national entities. The combination of regulatory failure at the state level and the simultaneous expansion of the interstate electricity market led to calls for federal intervention. In 1935, a watershed was marked in the history of electricity regulation when Congress passed two major statutes providing federal policy makers greater authority over the industry: the **Federal Power Act** (FPA) and the **Public Utility Holding Company Act** (PUHCA).

The Federal Power Act of 1935 initiated the federal regulation of interstate and wholesale electric power transmission and transactions. Wholesale electricity transmission involves the sale of power by generators to other generators that control transmission and distribution facilities. The FPA also created the Federal Power Commission (FPC) to regulate interstate rates and quality, promote interconnection among firms, and restrict mergers and acquisitions if its members felt this was necessary. Four decades later, in 1977, the FPC was replaced by the Federal Energy Regulatory Commission (FERC) as part of the Department of Energy Organization Act.

The Public Utility Holding Company Act of 1935 proved to be very significant in the historic development of the industry, for it federalized certain responsibilities regarding holding company management. Electric holding companies, the umbrella companies that manage many smaller utilities, popped up across the United States in the 1920s and 1930s. Policymakers feared that these much larger and concentrated entities could deceive their investors by shuffling finances among the many different branches, divisions, or affiliates they managed. It was also widely feared that states no longer could control the actions of holding companies, which were national in scope and therefore outside state jurisdiction.

As a result, the PUHCA was passed. It requires holding companies that own or control more than 10 percent of another utility to register with the Securities and Exchange Commission (SEC) and provide detailed records of their financial transactions and holdings. The law also restricts merger and acquisition activity, curtails investment in non-utility industries, prohibits intercompany loans, and strictly regulates other financial transactions such as the issuance of new securities. Most important, the statute constrains and even narrows the powers of holding companies—allowing them essentially to control only utilities within a given state—to maximize state control, a primary objective. Finally, the PUHCA created and maintains a regulatory distinction between "registered" and "exempt" holding companies. To qualify for an exemption from the PUHCA, a holding company primarily must be *intra*state in geographic scope and limited in business operations to the provision of a basic utility service. Not surprisingly, this generally has discouraged firms from expanding operations; only 14 "registered" holding companies cur-

26 *Ibid.*, p. 46.

rently exist in the United States. Over 150 "exempt" holding companies exist that exclusively serve customers within their own states.

Over time, critics of the PUHCA have noted that the law's impact was obviously to restrain or at least delay beneficial economies of scale from developing via expanded interstate integration of facilities.[27] This is still somewhat the case, although the larger problem posed by the continued existence of the PUHCA lies in the way it prohibits innovative state and local experiments to foster a competitive marketplace. As Michael Block, a senior fellow at the Washington-based Progress and Freedom Foundation, notes, the PUHCA is "a major barrier to reform efforts underway in the states" because it "greatly hinders and complicates... state efforts at introducing competition."[28]

Despite the fact that almost every state is considering plans to restructure its respective utility sectors, the PUHCA discourages such mutually beneficial experiments. It prohibits the states from opening up the retail electric market to competition through "unbundling," the process of separating the functions of the electric industry into its three distinct components—generation, transmission, and distribution—in order to allow consumers to purchase electricity from generators of their choice. By generally restricting or discouraging interstate integration and expansion, state-by-state restructuring efforts become difficult, since the unbundling process might serve to create new federal holding companies and thereby create a vicious circle of regulatory and legal battles among state and federal policymakers. A number of other requirements under the PUHCA might shift these newly restructured entities effectively into new regulatory classifications. Both the states and the industry players would be discouraged from advocating such actions while the PUHCA remains in place.[29]

It is both ironic and unfortunate that although the PUHCA's intent was to encourage primary control over utilities to remain with the states, it has had the effect of restraining their efforts to encourage greater competition in the electric industry. Furthermore, as a recent Progress and Freedom Foundation report noted: "Although PUHCA is viewed as serving consumers' interest by limiting market power through merger control, in fact the

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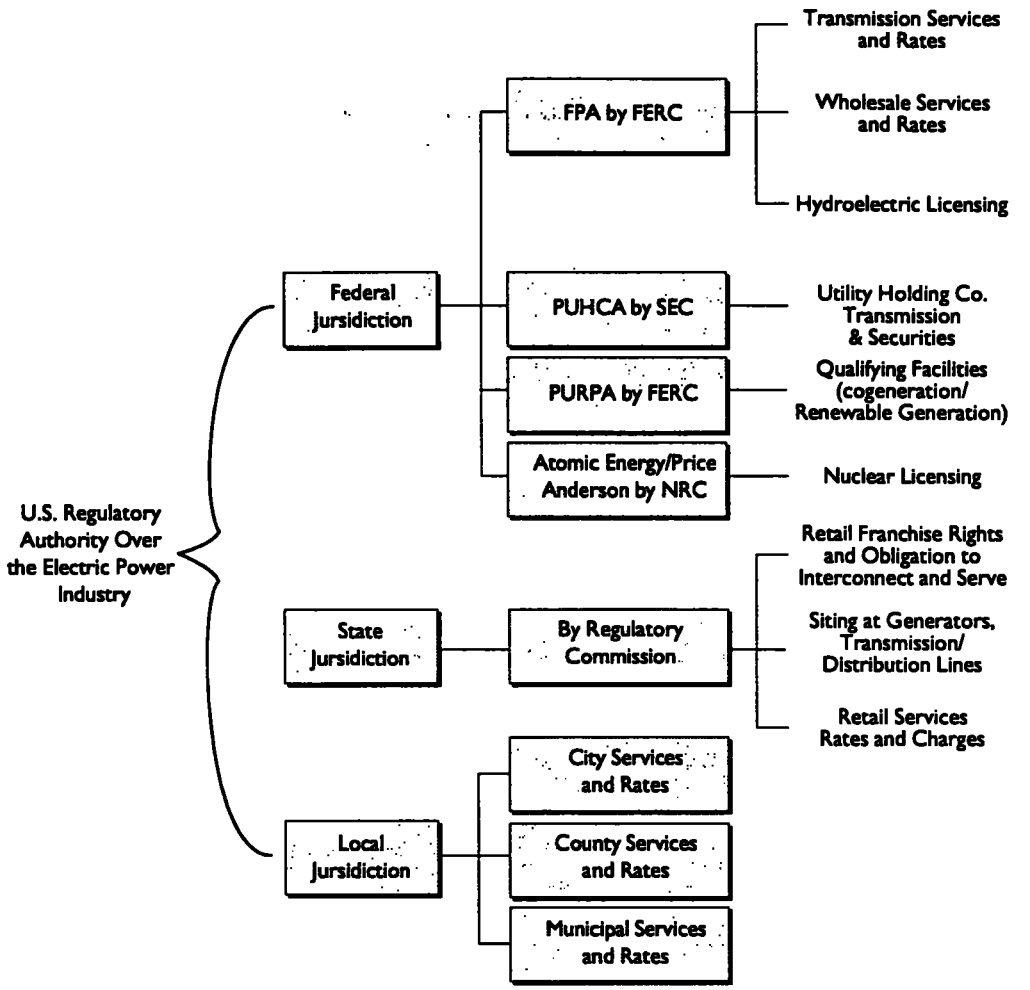
27 As Alfred Kahn argued in 1971: "[It] began to appear, 25 to 35 years after the passage of [the PUHCA], that the SEC's discouragement of new holding company systems was increasingly incompatible with the dramatic technological developments that became manifest in the decade after World War II. The sharply increasing economies of scale in generation and long-distance transmission at high voltages counselled integration of the industry over wider and wider areas. Largely because of the traditional, localized structure of the industry, a tradition intensified by the unhappy experience with the holding companies and by the 1935 Act, the necessary coordination was achieved principally by voluntary collaboration among operating companies. The collaboration fell considerably short of achieving the full possible advantages of complete integration, and particularly the integrated planning of investment." *Ibid.*, p. 73. Kahn goes on to note that the resulting loss of scale economies that resulted from the PUHCA's restrictive guidelines simultaneously raised the overall cost of power and discouraged technological progress within the industry.

28 Michael K. Block, "Energy Deregulation: Moving Ahead Quickly (and Wisely)," Progress and Freedom Foundation *Progress on Point*, Release 1.10, June 11, 1996.

29 Specifically, prohibitions on diversification into other lines of business under the Act, the important determination of "exempt" versus "registered" under the law, and other sections of the PUHCA compelling increased SEC oversight and filing requirements could all serve generally to discourage restructuring and expansion efforts. It is also worth noting that these PUHCA provisions might serve to discourage firms in other lines of business, such as telecommunications, from entering the electric industry as a potential competitors.

Chart 3

Understanding Regulatory Jurisdictions Within the Electricity Market



Source: Bracewell and Patterson, LLP.

Act *increases* market power by raising barriers to entry into newly restructured markets."[30] In other words, if the PUHCA remains intact much longer, efforts to expand competition are less likely to move forward successfully in the near future.

The Federal Power Producers. The New Deal period brought not only the rise of direct federal regulation of the electric industry, it also marked the beginning of the direct federal provision of power through the Rural Electrification Administration (REA), the Tennessee Valley Authority (TVA), and a handful of federal Power Market Administrations (PMAs). Legislators in the 1930s believed federal action was needed to facilitate

30 Thomas M. Lenard, R. Richard Geddes, and Michael K. Block, "The Competition Revolution and the Market for Energy: The Benefits of Repealing the Public Utility Holding Company Act of 1935," Progress and Freedom Foundation *Future Insight*, No. 3.4, June 1996, p. 19.

the development of rural America and ensure that rural citizens were guaranteed access to certain technologies that were becoming fairly ubiquitous throughout urban America. To make certain that electric power was available to the poorest and the most remote areas of the nation, federal legislators implemented an "alphabet soup" package of programs in the 1930s:

REA (RUS). The Rural Electrification Administration (now the Rural Utilities Service, or RUS) was created in 1936 to electrify rural America by providing subsidized loans and grants to rural electric cooperatives. In the 1930s, only a fraction of farms and rural households had access to electricity, but by the mid-1950s the proportion of rural homes with electricity matched suburban penetration. REA continued to expand into the 1990s despite this achievement, and it continued to provide deeply subsidized credit to eligible electric co-ops until 1993, when Congress lessened the interest rate subsidy available on these federal loans. Currently, the highest rate paid by an electric co-op borrower is the lesser of 7 percent or the rate the U.S. Treasury pays to borrow.

TVA. The Tennessee Valley Authority was created in 1933 to serve the power needs of much of the Appalachian region and ensure it developed commercially over time. Over the past few decades, the TVA has developed numerous nuclear facilities that, for a variety of reasons, have proven uneconomic and non-operational. This has caused the accumulation of billions of dollars worth of TVA debt. Worse, the TVA continues to hold the Appalachian region hostage to its monopoly—customers in that region have even fewer purchasing options than residents of other regions of the United States.

PMAs. The Department of Energy (DOE) operates five Power Marketing Administrations, which sell at the wholesale level electricity that has been generated by approximately 130 power plants (mostly dams) built and maintained by the Army Corps of Engineers and the Bureau of Reclamation. In 1994, the Alaska, Bonneville, Southeastern, Southwestern, and Western Area PMAs sold nearly $3 billion worth of electricity, according to the Energy Information Administration. Like the TVA, PMAs have continued to receive generous subsidies to remain in business.

Despite the radical demographic and economic alteration of America's rural communities since the New Deal era, these federal power programs have remained intact. Although rural America has grown and prospered in relation to urban communities in the postwar era, the New Deal power programs continue to be run as if rural America was an economic wasteland incapable of supporting itself. In fact, Douglas A. Houston, professor of business economics at the University of Kansas and one of America's leading experts on federal power issues, has observed that federal power programs are nothing more than old-fashioned redistributionist programs that inefficiently attempt to continue a mission that was completed long ago. Houston notes that the TVA and the PMAs receive roughly $7 billion to $10 billion in subsidies per year.[31] In his words, "These subsi-

31 Douglas A. Houston, "Federal Power: The Case for Privatizing Electricity," Reason Foundation *Policy Study* No. 201, March 1996. Other studies have found similar subsidization levels. See *Subsidies and Unfair Competitive Advantages*

dies simply transfer wealth to a set of lucky citizens who are no less affluent than their fellow citizen-taxpayers."[32]

The Privatization Option. Although privatization options for the electricity industry have been advocated by various parties for quite some time, supporters of the status quo argue that federal power producers are not subsidized in the first place. The opposite is the case: Public power entities certainly receive generous subsidies. The TVA and PMAs receive federal loan guarantees and below-rate interest charges on federal loans, tax-exempt status from federal and state income taxes, and other important tax breaks including lower property taxes and smaller excise taxes.[33]

Although supporters of the status quo also argue that privatization options would "hurt" consumers, there is an overwhelming consensus among experts that privatization would benefit all Americans. Douglas Houston has estimated that privatizing the TVA and the PMAs would generate between $15 billion and $30 billion for federal coffers.

The continued existence of these federal power programs does more than just squander taxpayer money. It will hurt consumers by discouraging the development of competitive opportunities in those areas in which the federal power providers remain active because these entities are accorded favorable treatment relative to private power providers. In other words, if legislators attempt to open electric markets to competition without simultaneously privatizing the TVA and PMAs, a most uneven playing field will be the result, which will diminish the beneficial effects of liberalization for consumers.

Dozens of public power privatizations have taken place in the past few years across the globe, yet only one of the five American PMAs—the Alaska Power Marketing Administration—is scheduled to be privatized. Furthermore, the RUS remains intact despite the fact that its mission has also been completed. Hence, unfair and anticompetitive subsidies remain in the electricity marketplace that must be eliminated if deregulation is to be a success.

The Development of the Modern Industry

The result of the growth of federal and state regulatory policies in the electricity marketplace was an industry structure that changed little from the New Deal era to the late 1970s. The four primary types of service providers that dominated the post-New Deal era were investor-owned utilities, publicly owned utilities, cooperative utilities, and federally operated utilities.

Investor-owned utilities: Most Americans are serviced by private, investor-owned utilities (IOUs) with publicly traded stock that is freely traded in the market by

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Available to Publicly-Owned and Cooperative Utilities, prepared by Putnam, Hayes & Bartlett, Inc., for the Edison Electric Institute, September 1994; Energy Information Administration, *Federal Energy Subsidies: Direct and Indirect Interventions in Energy Markets* (Washington, D.C.: U.S. Department of Energy), November 1992.

32 Houston, "Federal Power: The Case for Privatizing Electricity," p. 1.

33 For a more detailed summary of the types of subsides public power entities receive, see "Privatization of the Power Marketing Administrations," Testimony of Clyde Wayne Crews, Jr., Fellow in Regulatory Studies, Competitive Enterprise Institute, before the U.S. House of Representatives Committee on Resources Subcommittee on Water and Power Resources, May 18, 1995, pp. 3-4.

their shareholders. Although IOUs must operate under the regulatory constraints imposed by state PUCs, their financial health is all but guaranteed. That is, although PUCs must impose certain restraints on the profits and the prices IOUs can charge consumers, PUCs also are careful to ensure the financial viability of these IOUs by shielding them from competitive forces and other risk factors. As a result, any IOU inefficiency is actually rewarded—*the higher the costs they incur, the greater their revenues and profits because their rate of return is set by regulators to cover their costs plus a profit.* This is referred to as "rate of return" or "cost-plus" regulation. Thanks to cost-plus regulation, IOUs are one of the most popular stocks with long-term institutional investors; they yield generous returns while posing little risk to the stockholders' portfolios. But, although IOUs are accorded certain protections and guarantees from the PUCs that regulate them, IOUs are taxed and treated like all other private business.

Publicly owned utilities: From the late 1800s through the New Deal era, numerous municipalities across the United States established their own public power facilities to serve their communities exclusively. Publicly owned utilities still serve such large cities as Los Angeles and Seattle. They are exempted from state and federal taxes and can sell tax-exempt securities on the open market, a benefit that caused many private sector investor-owned utilities to charge that publicly owned utilities have an unfair advantage that allows them to acquire capital more cheaply.

Cooperative utilities: Many utilities are collectively owned by a group of organizations that run the utility exclusively for their own use. They primarily serve co-op organizations in rural communities, such as groups of farmers. These cooperative utilities can incorporate within their state and be taxed by the state accordingly, but they are often exempted from all state and local taxes. Cooperatives also are able to draw on funds and technical expertise from the RUS and are not forced to pay federal taxes.

Federal electric utilities: The federal government owns and operates a handful of large power companies. The TVA and the PMAs are funded by federal tax dollars and therefore pay no taxes. Federal electric utilities resell much of their generated power to publicly owned and cooperative utilities at cheap rates; this power is then resold to the end users.

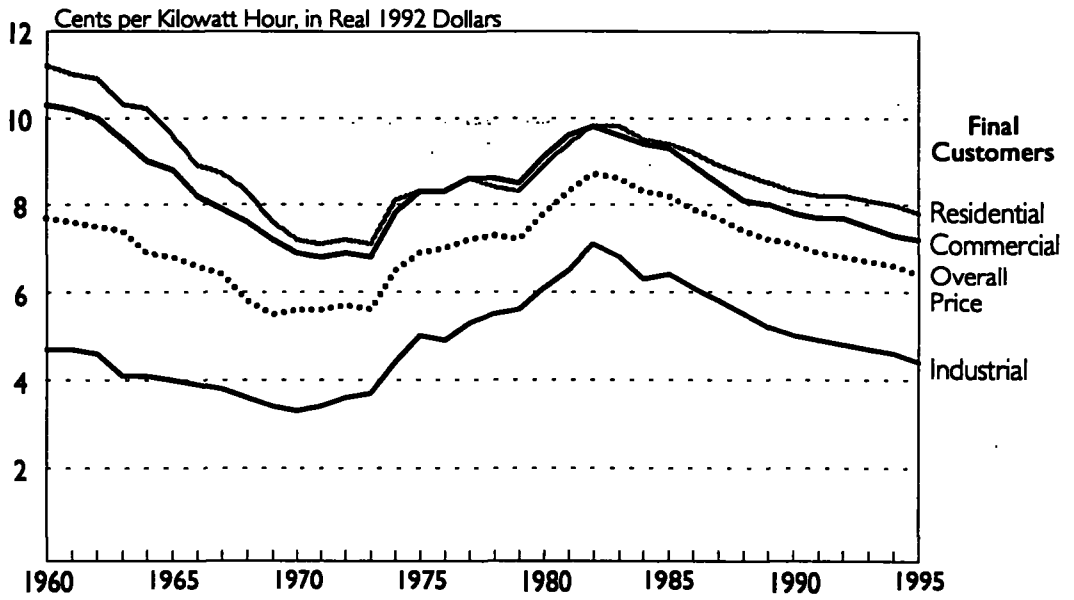
The Resurrection of Competitive Power Generation Facilities

The late 1970s witnessed—quite accidentally—the birth of an important new segment of the electricity industry known as the independent power producers, or the IPPs. During the energy crisis in the 1970s, Congress felt compelled to do more to encourage energy conservation within the electricity industry.

The Public Utility Regulatory Policies Act of 1978 (PURPA) was enacted largely to encourage the use of alternative energies. Its method of doing so was by designating certain small IPPs (such as solar, wind, and geothermal producers) and co-generators (which simultaneously produce both electricity and steam, heat, or other forms of useful energy) as "qualifying facilities" (QFs). Alternative energy producers that were designated QF earned exemptions from existing laws, most notably the PUHCA. More important, incumbent regulated utilities were required to purchase electricity wholesale from these qualifying facilities at their "avoided cost." This meant regulated utilities were

Chart 4

Retail Electricty Prices: 1960-1995



Source: Energy Information Administration

forced to purchase QF-produced electricity at the same cost they would have incurred producing it themselves or purchasing it from another comparable provider.

Ironically, although the PURPA was meant to be an environmental statute, it had the more remarkable—and entirely accidental—effect of fostering increased competition within the field of electricity generation. According to data from the Energy Information Administration's *Annual Energy Review 1995*, prices dropped rapidly after the introduction of the PURPA, from roughly 7.8 cents per kWh in 1980 to roughly 6.4 cents per kWh in 1995. As prices fell and supplier options multiplied, it became increasingly obvious to industry watchers that a viable free market might exist in the electric industry. And since 1990, IPPs have made over half of all new investment in new generating facilities.[34]

A 1992 report by President George Bush's Council on Competitiveness noted that "The experience gained through PURPA shows that non-utility firms can build innovative, economic, and reliable power plants."[35] President Bill Clinton's Council of Economic Advisers agreed, and stated in its 1996 *Economic Report of the President*, "PURPA demonstrated that independents could build generators on time and on budget and could be reliably integrated into the transmission grid, subject to utilities' control."[36]

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34 Council of Economic Advisers, "Promoting Competition in Traditionally Regulated Industries," in *Economic Report of the President* (Washington, D.C.: United States Government Printing Office), February 1996, p. 182.

35 "Energy," in *The Legacy of Regulatory Reform: Restoring America's Competitiveness*, The President's Council on Competitiveness, Vice President Dan Quayle, Chairman, September 1992, p. 22.

And Richard F. Hirsh, author of *Technology and Transformation in the Electricity Industry*, argues that perhaps the most important outcome of the PURPA is that it "has furthered moves for even more deregulation by stimulating discussions about the rationale for the utility industry's status as a natural monopoly" because independent power producers proved they could make better use of resources and also help reduce costs (which is not supposed to happen in a market thought to be naturally monopolistic).[37]

Under the **Energy Policy Act (EPAct) of 1992,** the pro-competitive benefits of the PURPA were extended and enhanced. The Act gave non-utility generators the right to engage in wholesale "wheeling," whereby they could sell power to any other utility along the transmission lines, not just the local utility that was situated the closest to them. To foster this activity, the EPAct created an important new legal classification known as the "exempt wholesale generator" (EWG) that would not be considered a traditional utility and, therefore, would not be covered by regulations the other utilities faced (most notably, the PUHCA). Legal scholars Jeffrey D. Watkiss and Douglas W. Smith noted that the Energy Policy Act "fundamentally changes federal regulation of the electric utility industry, greatly facilitating the development of a competitive market for wholesale electric power" and that it "may prove to be the watershed event leading to a restructured U.S. power market."[38]

In April 1996, to implement and extend further the pro-competitive benefits of the PURPA and EPAct, the FERC issued **Orders No. 888 and No. 889**; these orders provided more specific guidelines on how transmission lines are to be opened up to competitors on a non-discriminatory basis. The orders require vertically integrated monopolistic utilities to offer access at a single-tariff rate comparable to what they would charge themselves for similar access. The FERC has estimated that approximately $3.8 to $5.4 billion in benefits will be generated each year under these proposals.[39]

PULLING THE PLUG ON REGULATION

The Avenues of Choice

The PURPA, the EPAct of 1992, and the latest FERC orders seeking to open up the electricity marketplace to competition all build on the open access philosophy of deregulation. Complete open access within the electric market would require all vertically integrated utilities to open their transmission and distribution facilities to rivals so they could "wheel" their power across those lines to customers. Currently, under the PURPA, the EPAct, and FERC No. 888, only "wholesale wheeling" has been required; independent producers have been given only the ability to sell their power to other generating utilities who then make that power available for resale to customers along their lines. "Retail

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36 Council of Economic Advisers, "Promoting Competition in Traditionally Regulated Industries."

37 Richard F. Hirsh, "Regulation and Technology in the Electric Utility Industry: A Historical Analysis of Interdependence and Change," in *Regulation: Economic Theory and History*, ed. Jack High (Ann Arbor: The University of Michigan Press, 1991), pp. 169-70.

38 Jeffrey D. Watkiss and Douglas W. Smith, "The Energy Policy Act of 1992—A Watershed for Competition in the Wholesale Power Market," *The Yale Journal of Regulation*, Vol. 10 (1993), pp. 447-92.

39 Federal Energy Regulatory Commission, Order No. 888, Final Rule, April 24, 1996.

wheeling" would allow these independent generators to sell their power directly to any sort of final customer along the transmission/distribution lines, whether they are commercial, industrial, or residential consumers.

Open access. Open access to existing networks is a somewhat controversial deregulation strategy because its application and continuation does require a small degree of transitional regulation and raises legal concerns about ownership and control of transmission networks. Open access has proven itself vastly superior, however, to the current regulatory arrangement. As Competitive Enterprise Institute analyst Matthew C. Hoffman noted of the superiority of access regimes in 1994:

> A retail wheeling regime... would reduce the scope of regulatory oversight significantly. Regulators who are currently charged with monitoring utility expenditures and second-guessing a range of utility investment decisions through "prudence reviews" would confine their focus to expenditures associated with the absorption and retransmission of power, and the maintenance of transmission capacity by the host utility in its capacity as transactor on behalf of retail buyers within its service territory. Although utilities have nominal ownership of transmission and generation capacity, those assets were obtained by utilities through a system of monopoly privilege protected by state and federal governments. Requiring utilities to facilitate any transactions of an open electricity market by wheeling power for customers in their service areas is hardly unreasonable.[40]

Open access would provide a smooth transition to a truly free and competitive electricity marketplace. Competitive forces and incentives would be active in the market. Going "cold turkey" in approaching deregulation, on the other hand, would allow the large regulated monopolies, which were put in their advantageous position by government officials, to continue operating on a significantly uneven playing field. Open access requirements level the playing field, as new entrants prepare to battle existing incumbents in a deregulated environment. Regulatory economist Clyde Wayne Crews of the Competitive Enterprise Institute asks, "Does it make sense for monopoly utilities suddenly to enjoy a massive expansion of access to customers over monopolized transmission lines while non-utility power generators remain shut out, and while the final customer is denied direct access over those same semi-public rights of way?"[41] Crews argues:

> PUHCA repeal might afford some added efficiencies in provision of electric service, but a far more important issue—which should be the sine qua non for repeal—is that of direct customer access and choice in the marketplace. Direct access should be the price of repeal.[42]

In the natural gas market, open access policies initiated by Congress under the Natural Gas Policy Act of 1978 and carried out by the FERC throughout the 1980s have proved to benefit that industry and its consumers greatly in just this fashion. Economists Michael J. Doane and Daniel Spulber noted that "open access has brought competition to

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40 Matthew C. Hoffman, "The Future of Electricity Provision," *Regulation*, No. 3 (1994), p. 59.

41 Clyde Wayne Crews, Jr., "Stand-Alone PUHCA Repeal in the 104th Congress: We Can Do Better," *The Electricity Journal*, January/February 1996, p. 47.

42 *Ibid.*, p. 46.

the national market for natural gas," with superior pricing polices and more efficient contractual arrangements.[43] Open access arrangements also are being utilized in the telecommunications market to spur competitive forces. In passing the Telecommunications Act of 1996, Congress made open access and interconnection the centerpiece of its deregulatory strategy for an industry that shares a common regulatory history with the electricity sector.[44]

Open access, therefore, would *functionally unbundle* distinct network components and ensure that the monopolistic utilities could not restrict access to the transmission network unfairly. This would provide consumers a real choice in who supplies them with electricity.

Divestiture. Vertical disaggregation, or divestiture, is the only other realistic deregulatory method beside open access policies that legislators could employ to ensure competition takes hold in this industry. Monopolization of transmission and distribution facilities was forced on the electricity marketplace when vertical integration was viewed as the most efficient method of "energizing America." But once individual utilities were handed control of all transmission and distribution facilities, vigorous competition no longer was possible. Disaggregation can correct this historical mistake by requiring that the monopolistic electricity companies divest either their generation or transmission/distribution facilities, and sell them in an open-market auction. This *structural unbundling* requires the distinct breaking apart of the major components of the electric industry.

Such divestiture, similar to that required of AT&T in the early 1980s, would have the effect of immediately creating a competitive market for electricity generating and primary transmission/distribution facilities in a given region. Under divestiture, the large monopolistic utilities would choose the segment of the electricity business in which they preferred to remain—generation or transmission/distribution, and they would sell the other facilities and assets in open market sale.

In all likelihood, most large utilities would opt to retain their transmission lines and divest their generation facilities because the transmission business promises to be extremely lucrative. This might help solve one of their dilemmas—the recovery of stranded costs—because they could sell off their generating assets if they are less profitable or economic. The revenues generated by auctioning less efficient generating facilities, for example, would allow utilities to recover at least some of the costs associated with undesired plants and assets.

Divestiture presents a slightly more radical, although easier, method of ending the state of uncompetitive vertical integration in the electricity market. It is more radical in that it

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43 Michael J. Doane and Daniel F. Spulber, "Open Access and the Evolution of the U.S. Spot Market for Natural Gas," *Journal of Law and Economics*, Vol. 37 (October 1994), p. 514.

44 It is also important to note that the courts have upheld the constitutionality of open access requirements under previous laws. Despite industry challenges arguing the interconnection and QF producer purchasing requirements, the open access elements of the PURPA were upheld by the Supreme Court in two separate cases. See *Federal Energy Regulatory Commission* v. *Mississippi*, 102 S.Ct. 2126 [1982] and *American Paper Institute* v. *American Electric Power Service Corporation*, 103 S.Ct. 1921 [1983]. For a general description of the outcome of the cases see "High Court Upholds Utility Rules of United States," *The New York Times*, May 17, 1983, p. D1.

requires the legal separation of assets previously controlled by individual monopolies. Yet it is simpler than enacting an open access solution; it would not require detailed transitional rules and new regulations that could prove counterproductive. Once divestiture is pursued, the complete and immediate deregulation of all other rules can be undertaken safely.

The Case Against "Cold Turkey" Deregulation. The only remaining option beside divestiture or open access would be to take a "cold turkey" deregulatory approach and simply eliminate existing rules without any serious attempt to de-monopolize the industry. Although this approach has great appeal, in principle it suffers from practical defects. Among them are:

- A de-monopolization period is needed to right the regulatory wrongs of the past. State and federal legislative and regulatory actions led to monopolies within the market initially, and a deregulatory period would offer legislators a unique opportunity to re-establish the industry on the correct, pro-competitive track.
- The physics of producing electricity means that alternative, independent utility transmission and distribution networks cannot proliferate as rapidly as have the telecommunications networks. De-monopolization efforts are needed to ensure that, until competing lines can be constructed, customers can access multiple suppliers.[45]
- If monopolies are not broken up by legislative action soon, a host of legal battles regarding network access will arise quickly, forcing court-mandated divestiture upon monopolistic utilities. If the courts are to be kept out of the process so that elected, accountable representatives determine which de-monopolization strategy should be pursued, legislators at the state and federal levels must craft the strategies to deal with the uncompetitive structure of the industry.

Open access or vertical disaggregation, therefore, are transitional mechanisms that, over time, could move the industry away from the archaic regulated monopoly model toward a new free market model based on consumer choice.

The Biggest Hurdle: Stranded Costs

Although the benefits of competition are relatively clear, an important impediment to reform exists—the problem of stranded costs or the investments regulated utilities made over time that may become uneconomical with the onset of competition. For example, if competitors with superior generating facilities are able to enter the market and offer power directly to customers, the assets and facilities owned by the regulated utilities quickly may become obsolete or uneconomical to operate. Historically, deregulation often has been followed by the anticipated shake-out of inefficient services and facilities, whether it occurred in the telecommunications, transportation, or natural gas industries. Irwin M. Stelzer, director of regulatory policy studies at the Washington-based American Enterprise Institute, observed:

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45 Telecommunications companies serve customers via either a set of physical wires or wireless cellular-based systems. It is doubtful that electricity customers will be offered multiple wires to their homes or businesses. Furthermore, the physics of electricity production preclude wireless cellular transmission of electrical current through the air without a conduit.

> The argument that regulatory rules should not be changed, especially after billions have been invested pursuant to those rules, has considerable appeal, but it is in the end not entirely compelling. Every utility executive has always known, and many have loudly proclaimed, that regulators are fickle, responding to changing fashions, the political winds, and, often at the urging of the industry, to changing economic circumstances. Surely, it is not implausible to assume that intelligent investors factored the risk of rule changes into the return they have demanded for exposing their capital to the tender mercies of [regulators].
>
> Is it not... plausible to argue that investors knew that regulatory rules change, that they made their investments forewarned of that possibility, and that they have in the past been compensated for the risks for such changes? Also... utility shares have often sold at prices that suggest that shareholders anticipated and received earnings well above those that strict regulation might produce. So... it is arguable that investors have received rewards that have amply compensated them for the risk that rules would be changed.[46]

Holman W. Jenkins, business columnist for *The Wall Street Journal,* echoed these sentiments: "[W]hy should utility investors be uniquely indemnified against change? That favor was not forthcoming to the owners of airlines, railroads, and natural gas and trucking companies. And anybody who was paying attention saw that electricity was destined for the same buzzsaw."[47] A large number of utilities already have absorbed their losses by gradually writing off a large number of assets they feel may prove to be uneconomical in the future. Utilities that waited to make such sound business decisions hardly should be rewarded when other firms absorbed these losses for years. In addition, most large utility stocks are held in portfolios that are controlled by institutional investors on Wall Street, not by old grandmothers or retired couples—as many utilities would lead the public to believe. Institutional investors write off such losses by downgrading utility stocks that appear risky in a competitive future. Because of these facts, further stranded cost recovery is difficult to justify.

The monopolistic utilities that stand to lose the most if stranded investments are not recoverable argue that a "regulatory compact" existing among legislators, the public, electric companies, and their shareholders must be honored. They argue that they have made investments in good faith, believing that their companies would always have a safety net if things went wrong.[48] Beyond Stelzer's arguments, little substantive evidence can be offered by these utilities to show such an explicit compact or contract existed. Although a

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46 Irwin M. Stelzer, "What Happens When the Rules Are Changed and the Plug is Pulled on Electric Utilities? The Positives and Negatives of Government Action," *The American Enterprise*, November-December 1994, pp. 80-81.

47 Holman W. Jenkins, "Electricity Producers Run Screaming From Reality," *The Wall Street Journal*, May 14, 1996, p. A21.

48 See also J. Gregory Sidak and Daniel F. Spulber, "Deregulatory Takings and the Regulatory Compact," American Enterprise Institute *Conference Paper*, March 7, 1996; William J. Baumol and J. Gregory Sidak, "Stranded Costs," in *Transmission Pricing and Stranded Costs in the Electric Power Industry* (Washington, D.C.: The AEI Press, 1995), pp. 98-114; William D. Steinmeier and Linda G. Stuntz, "Stranded Costs: A Study on the Treatment of, and Jurisdiction Over, Electric Utility Costs During Transition to a More Competitive Market," prepared and distributed on behalf of the Edison Electric Institute, 1995.

handful of court cases allude to the general concept of a compact among monopolistic utilities, the government, and the public, these cannot seriously be held up as the equivalent of an actual contract signed by all parties affected, especially the consuming public. There is no reason to believe the public would have accepted voluntarily restricted choice, mediocre service, and high electricity prices. As Wayne Crews has argued, "this so-called compact is one-sided; ratepayers were never asked if they wanted to take part in it, nor did they ever sign such an agreement. And even if ratepayers had signed such a deal, a rational contract would have included the right to opt out once cheaper service became available."[49]

Monopolistic utilities also argue that they have been unfairly required by policymakers and regulators to make numerous investments that may prove uneconomic in the competitive future. When utilities can show that they invested in certain facilities or projects as a result of a direct written order or the strict request of a regulator or legislative official, then they have grounds for recovery. Yet claims currently being made by such utilities greatly exceed such reasonable judgments. In fact, aggregate stranded cost estimates that are frequently tossed around in industry discussions and trade journals range from a low of $50 billion to an amazing $500 billion. Most utilities that stand to gain the most use an approximate figure of $200 billion. Even this figure is absurd when it is compared with annual industry revenues that are approximately the same. If monopolistic utilities argue that their past investments were so ill-considered that their potential losses in a competitive market are roughly equal to the amount of money they now earn collectively each year, then this is a serious indictment of the current monopolistic system. It is difficult to imagine that a free electricity market would produce inefficiencies of this extent.

Even worse, if recovery of stranded investments of the magnitude the industry estimates is mandated by policymakers, then any savings that America's electricity consumers expect as a result of deregulation would be negated by increased payments to large monopolies. If large utilities successfully make stranded cost recovery the quid pro quo for competitive entry, not only will electricity users have to foot the hefty bill in the form of higher prices, but they will also have fewer options and less sophisticated service. This certainly will be true if the potential new industry entrants are discouraged from tapping the new markets because they will face such a high entry fee.

A Blueprint for Deregulating the Electricity Market

Why Federal Action Is Needed

Immediate legislative action is needed at the federal level to ensure that consumers reap the rewards of a more competitive electricity market in the future. Policymakers should be prepared for opposition. Industry representatives may argue that government action is not needed or that, if any legislative action is called for, it needs to take place only at the state level. Such arguments represent the kinds of "stall tactics" that will be used by the large monopolistic utilities who hope to delay the deregulatory process or at

49 Clyde Wayne Crews, "Ending the Electricity Monopoly," *The Journal of Commerce*, September 1, 1995.

least to move the debate into the state legislatures, where they believe their lobbying with have a better chance of achieving a more favorable outcome.

Although there is certainly an important role for the states and localities in the deregulatory process, federal action must be pursued for three principal reasons:

- **The electricity market is increasingly becoming a seamless web of interconnected networks that will resist being carved into neatly defined and clearly distinct markets or regulatory jurisdictions.** Like the airline, telecommunications, and trucking industries that required federal deregulatory action, the U.S. electricity market has become so large and interacts so smoothly across state lines that regulation based primarily on geographic boundaries makes little sense today. When electrical current travels over state borders, the physical nature of that current does not change, yet the laws governing it do change. This causes unjustifiable differences in rates from one region of the United States to another and other unnecessary burdens on interstate commerce that only federal action can rectify.
- **Large service areas that could be served by many alternative power providers across the United States are restricted by the single firm monopolies that have been given exclusive franchising arrangements.** Unfortunately, exclusive franchises remain across the United States and continue to prohibit competition. These franchises present an unjustifiable burden on interstate commerce and should therefore be ended. Fred Smith, president of the Competitive Enterprise Institute, aptly argues, "There is no theory of 'states rights' that legitimizes a state's barring citizens within its borders from purchasing power from outside the state.... Nor is there any 'right' to prohibit a generator from selling outside of its state's borders. The interstate commerce clause of the Constitution was intended to prohibit such restraints of trade."[50] Yet many states, comfortable with their monopolistic franchises, are not likely to end this system on their own. Hence, federal action is required.
- **Many of the problems associated with the modern electric industry were created by federal statutes and regulations.** These statutes and regulations are still on the books and continue to distort or disallow competition from developing in this industry. The Federal Power Act, PUHCA, and other FERC orders must be repealed or radically reformed if competition is to take hold. Clearly, only the federal government can initiate this task. Furthermore, only federal action can solve the problems posed by the PMAs and TVA.

The Eight Guiding Principles for Federal Action

The need for federal action is obvious from the economic as well as the policy standpoint. But not all deregulatory plans are equal. Any deregulatory legislation crafted by Congress should be based on clear, free market-oriented principles that will complete the job of electricity liberalization as rapidly as possible. The following principles and strategies provide Congress with a useful blueprint for electricity reform legislation:

50 Fred Smith, in personal correspondence to Citizens for State Power, dated August 28, 1996.

1. **Congress immediately should eliminate all barriers to entry into the electricity market and all impediments on commerce and competition within the interstate electricity sector.** This is most important first step toward the creation of a free market in electricity. Congressional action should include repeal of the Federal Power Act and the PUHCA. Beyond these statutes, almost all previous FERC orders must be overturned and more recent statutes such as the PURPA and the EPAct of 1992 must be superseded by a more deregulatory-minded strategy, as outlined below. All regulations involving rate-setting or price controls affecting the utility companies must end as utilities enter a competitive marketplace. Finally, exclusive state franchising must end, and the "state action doctrine" that allows states to ignore federal antitrust laws and establish state-sanctioned monopolies also must be terminated.

2. **Efforts must be taken to de-monopolize the industry through mandatory vertical disaggregation of industry segments, or through an open access plan that allows competition in the transmission grid.** Traditionally, individual generation companies have been granted regional monopolies over transmission and distribution lines. Government action is needed to ensure other generating companies can gain access to commercial and residential electricity customers served by those lines. Mandatory vertical disaggregation would cause the immediate creation of a competitive electricity market because no single utility would be allowed to own both generation or transmission/distribution facilities in a given region. Utilities opting to sell their generation assets and hold on to their transmission facilities would have an immediate incentive to solicit customers and generate profits. On the generation side, disaggregation would mean no single company would be granted preferential access to transmission networks. All firms would compete on equal terms for customer allegiance. Once vertical disaggregation is complete, other regulations should be repealed to free up the competitive market environment.

   The only foreseeable problem in divestiture may arise when a firm wants to reintegrate its generation and transmission facilities. A simple interim prohibition on reintegration of past facilities could be put in place as competition takes hold, and then phased out a few years later when multiple firms have the ability to counter such a move on their own in the free market through mergers and acquisitions. Furthermore, newly divested firms should be allowed and encouraged to build new generation or transmission facilities if they so desire.

   In recent years, a handful of states have put plans on the table for opening their electricity transmission grids to competition. At the heart of this philosophy lies the belief that new rivals will emerge to serve consumers if they have the ability to do so through the existing power transmission lines, just as competitors share networks in the telecommunications, railroad, and airline industries. Congress could encourage the continuation of these open access efforts in the states, and it should encourage reluctant states to pursue similar reforms to harmonize the national marketplace.

   Although on the surface the open access solution seems like easier medicine to swallow, in reality open access and interconnection policies are difficult to enforce and they are more likely to face regulatory delay and legal battles. The separation of monopolistic transmission facilities from incumbent generation companies is only *functional separation* under open access, whereas it becomes *complete structural separation* under mandatory vertical disaggregation. Although large incumbent utili-

ties that continue to own transmission facilities are required to open their networks to competitors on non-discriminatory terms, it is quite difficult to enforce. Regulators must pay constant attention to interconnection terms to ensure that all competitors are granted access to customers on fair terms.

Recent efforts to carry out open access plans in the telecommunications industry resulted in costly legal battles and federal court intervention. This has delayed the opening of communications facilities to competition. In addition, open access may discourage the construction of new transmission/distribution networks since competitors could always demand access to existing networks. Under a vertical disaggregation policy, companies would be more likely to consider building new networks if they felt it was possible to gain a competitive advantage over independent transmission/distribution companies.

Open access must be considered the second-best solution behind mandatory vertical integration because the latter policy would be more likely to advance industry competition in the short term without the regulatory headaches and legal hang-ups likely to accompany open access. Still, if mandatory vertical disaggregation proves too difficult to sell politically, an open access solution would be worth pursuing to ensure competition can take hold in this industry at some point in the near future. If open access rules are imposed, however, it is important that they are as limited in scope as possible and designed to sunset within five to seven years. Congress must not replace one complex, burdensome regulatory regime with another.

Congress must work in conjunction with the states when devising de-monopolization strategies. Congress should consider itself more of a backstop in this process because many states are already moving forward with their own reform initiatives. States should be encouraged to take the lead and continue this process without cumbersome federal intervention. Later, as the reform process unfolds state by state, federal action should supplement and equalize state initiatives by encouraging straggling states to move forward while simultaneously monitoring the potential uncompetitive activities of "bad actor" states seeking to protect monopolies within their borders. Optimally, a federal-state partnership or "competitive compact" will evolve out of this process that sees policymakers at both levels working together to smooth the transition to a competitive market as quickly as possible.

3. **Congress should place clearer guidelines in any bill governing stranded cost recovery; no state should be able to use this process to hinder interstate commerce by favoring incumbent producers.** The inevitable debate over stranded cost recovery has the potential of sinking the entire reform effort, but it does not have to. There is a sensible balance that can be struck to ensure reform moves forward and utilities with genuine uneconomic, mandated investments are compensated appropriately.

Federal legislators and regulators should formulate a pro-competitive stranded cost recovery mechanism that gives broad authority to the states to define the level of stranded cost recovery—because state officials were the parties most responsible for any uneconomic investments or activities mandated on investment in the first place. The federal role in this process would be minimal; it would focus on ensuring that the stranded cost recovery mechanisms used by the states did not discourage competitive forces from taking root. Federal guidelines should be established that

outline the utility investments that are "clearly recoverable" or "clearly unrecoverable." For example, "clearly recoverable" investments that could be considered worthy of compensation might include costs incurred by utilities to comply with federal mandates under the PURPA, or generation facilities that were built at the explicit request of regulators, despite reluctance by the utility. "Clearly unrecoverable" investments, on the other hand, might include ridiculous claims by utilities whose routine business costs such as renovations, remodeling, or maintenance are worthy of compensation by competitors. If states were to allow recovery on these types of items, it would be clear they were attempting to grant utilities under their jurisdiction an unfair advantage over competitors, which would constitute an unjustifiable burden on commerce.

There will be many stranded cost claims that lie between the extremes of what the federal government would outline as "clearly recoverable" and "clearly unrecoverable." This gray zone should be left to the discretion of the states. The only other general prohibitions or guidelines that could be justified from the federal level would involve the overall level of compensation provided to any single utility and the method of stranded cost compensation imposed by state regulators. Concerning the latter, it would be sensible for federal policy makers to outline mechanisms that would recover the costs associated with stranded cost recovery fairly in a nondiscriminatory, pro-competitive fashion, and those that would not. Federal guidelines also should warn the states that stranded cost recovery of excessive amounts will be considered an anti-competitive attempt to restrict entry, which will be prohibited. For example, if a given state required new rivals to incur outrageously excessive costs in stranded cost compensation to incumbent utilities via a discriminatory interconnection charge, this could serve as an indication that the state was acting to protect the incumbent utility from competition and would be disallowed. If vertical disaggregation/divestiture is pursued by federal policy makers instead of open access, this issue may be moot, however, because the sale of facilities by a monopolistic utility would likely provide them with ample returns on whichever set of assets they chose to divest.

Under any scenario, it is important that federal policy makers not allow the heated stranded cost debate to derail the deregulatory process. Furthermore, legislators should not allow monopolistic utilities to demand hefty amounts of stranded cost compensation as quid pro quo for opening the transmission network to competition. If they succeed in doing so, the deregulatory process will actually prove counterproductive.

4. **Congress must take steps to privatize the Power Marketing Administrations and the Tennessee Valley Authority, and to close down the Rural Utilities Service.** Privatization of the TVA and PMAs would benefit Americans in their capacity both as taxpayers and electricity consumers. Privatizing these entities will generate between $15 billion and $30 billion for the federal Treasury, and end $7 billion to $10 billion in annual subsidies. As a consequence, competition would have a better chance of taking hold in areas traditionally controlled by monopolistic federal power providers.

Privatization does not have to be completed all at once. Congress can put forward a structured privatization program that gradually divests assets in whatever fashion

they consider the most politically sensible. Since some TVA and PMA employees may find the notion of going private somewhat uncomfortable, Congress can assuage their fears by offering them stock shares in the newly privatized power company. And if power consumers in the regions traditionally served by the TVA or PMAs fear rate shock due to privatization, temporary price freezes can be established to ensure a gradual balancing of rates. Electricity consumers could be given the option of purchasing stock shares themselves in a general auction and perhaps even be allowed to pay for the stock purchase through installment payments on their monthly electric bills. It would be wise for policymakers to break the public power entities into distinct segments (generation/transmission/distribution) before they are privatized. This would help create a more competitive setting in markets traditionally served by these entities, and it may help bring in higher revenues through multiple auctions.

Many creative privatization options and alternatives exist that will ensure a smooth and beneficial transition.[51] As policymakers institute this plan, they should abolish the Rural Utilities Service, whose job was finished long ago.

5. **Congress should not mandate the use of any particular sources of energy, including renewable energy.** Congress will be tempted, and perhaps even threatened, by environmental groups and the Clinton Administration to load the deregulatory legislation with environmental mandates and programs as the price of their support for any bill. It will be a serious mistake to cave into these threats and demands. Electricity deregulation itself will be the most environmentally friendly action Congress can undertake. As journalist Jonathan Marshall notes:

> Competition will force electricity suppliers to price according to true marginal cost, rather than average cost, and this will encourage customers to control their energy demand more precisely. Competition will also give power companies an incentive to sell more than just electrons, including energy services like efficient lighting, innovative building design and heating, more informative metering, and energy controls that respond to changing prices.[52]

Furthermore, mandating that private companies use specific alternative technologies that have not yet proved themselves feasible on the open market could set back the original goals of deregulatory legislation. If solar, wind, hydrothermal, or other forms of alternative power production prove sustainable in the open market, then companies will adopt those means of production as their own. Prematurely mandating their use, however, could prove uneconomical to companies struggling to compete in newly liberalized markets, and it could drive up consumer prices significantly just as benefits of competition begin to take hold. It makes no sense for policymakers to argue boldly that they trust the market to provide better service and

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51 Also see Dr. Michael K. Block and Representative John Shadegg, "Lights Out On Federal Power: Privatization for the 21st Century," Progress and Freedom Foundation *Future Insight* 3.7, August 1996.

52 Marshall, "Competition Comes to the Electron Superhighway," p. 85.

prices to consumers only to turn around and contend the market will fail to serve Americans better in terms of safer, more environmentally friendly alternatives.

6. **Congress should avoid including new mandates, exclusions, or pork-barrel spending in the final bill.** Beyond the predictable push by environmental special interests to insert unnecessary mandates and programs into deregulatory legislation, many policymakers may feel tempted to insert programs or policies that are favorable to narrow interests in their home states. But carving out special exemptions to deregulation quickly will become a zero-sum game because if there are enough exemptions or new mandates added, they will effectively nullify any beneficial effects generated through liberalization.

   Before debate over legislation begins, legislators should make a pact with one another that they will make every effort to keep bills clean of unnecessary spending, bureaucracy, and exemptions. If they fail to reach such an agreement, not only will the legislation fail to produce the results they desire, but it may put final passage of any measure in jeopardy—because such insertions or amendments undoubtedly will prolong committee and floor debate.

7. **Congress should avoid costly new federal universal service mandates or programs.** Federal policy makers will be justifiably concerned about how well the least fortunate members of society are served in the new electricity environment. Clearly, electric power is an essential good in the lives or all Americans regardless of their lifestyle or income. Therefore, legislators will be tempted to greatly expand programs such as the Rural Utilities Service or to impose new universal service mandates or programs on private companies. This would be highly unfortunate and counterproductive. Almost all Americans have electricity lines running to their homes, so there is no need for grand new subsidies or programs that pretend an imaginary infrastructure crisis exists in the United States requiring big government solutions. Such efforts would burden the newly liberalized companies with unworkable and costly mandates that would actually hinder their efforts to compete effectively and serve customers better.

   Furthermore, legislators should not buy into the outdated, New Deal-era notion that rural America will require preferential treatment or a special subsidy program if deregulation moves forward. Geography no longer can serve as a good gauge of which Americans are most in need of assistance. Rural America is now better developed than most of urban America and is likely to be in a much better position to reap the rewards of a competitive electric industry.

   Yet, if there is a justifiable need to ensure the poorest Americans do not go without electricity, Congress, or state and local officials, can create targeted, means-tested programs. In-state officials can better identify at-risk households. Under no circumstance is it justifiable to mandate that private companies provide an array of services to consumers without being compensated for such actions. It is vital that government officials are honest about how much it costs to provide assistance, and then appropriate those funds from general tax revenues at the state or local level, just as they would with any other entitlement program. Voucher programs are best suited to this task. With the rise of a competitive marketplace, however, it is unlikely any such programs will be needed in the future as the price of electricity falls and companies create superior means of serving disadvantaged customers.

8. **Congress should establish a timetable to abolish the Federal Energy Regulatory Commission and the Department of Energy.** Once a pro-competition policy has been put into effect nationwide, there will be little remaining need for federal intervention or regulation of the electricity marketplace. As part of their plans to deregulate, policymakers should include a strategy and timetable for the eventual elimination of the Federal Energy Regulatory Commission and the entire Department of Energy. DOE tasks that are deemed essential for national security purposes should be transferred to the Department of Defense, where they rightly belong. Federal labs should be privatized. As for the FERC, its remaining regulatory functions can be taken over by the states eventually or sunset outright over time. This process could be accomplished within five to ten years.

CONCLUSION

Although nearly every other economic sector of the U.S. economy has undergone significant deregulation, legislators have yet to tear down the regulatory walls that surround what is commonly referred to as "America's last regulated monopoly"—the electricity market. With the success of deregulation in aviation, trucking, natural gas, and telecommunications, ample evidence exists warranting the embrace of free markets for electricity. Consumers of electricity—both industrial and residential—stand to reap rich rewards from competition in this market, just as they have in other deregulated industries. Furthermore, with numerous countries across the globe liberalizing their electricity sectors, Congress must take action soon to ensure U.S. electric firms retain and enhance their competitive international advantages in this field. The regulated monopoly model that has governed this industry throughout this century is hopelessly broken and cannot be fixed. It must be replaced completely and wholeheartedly by an unfettered free market in which consumers, not regulators, make the decisions.

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Key Electricity Terms[53]

Access: The ability to use transmission/distribution facilities that are owned or controlled by a third party, usually a monopolistic investor-owned utility.

Access charges: Fees charged by the owner of a transmission/distribution network to independent producers that want to gain access to the grid.

Ancillary services: Services provided by a utility in conjunction with transmission service that ensure generation services are delivered in a safe and effective manner.

APPA: The American Public Power Association, a national association representing municipally owned and other publicly owned electric utilities.

Avoided cost: Costs that an electric utility avoids by purchasing power from an independent producer rather than building a new generation facility itself. Under PUHCA and subsequent statutes and regulations, federal officials required monopolistic utilities to purchase power from qualifying independent generators for no more than the avoided cost it would cost them.

Baseload capacity: The minimum amount of electric generating capacity required for the steady, around-the-clock provision of power.

Bilateral contracts: Detailed contracts between producers and buyers of electric power to deliver a given amount of electricity at a given time according to pre-established specifications.

Bundling: The combination of generation, transmission, and distribution services into a packaged whole that is sold at a single rate to customers. (Also see "Unbundling.")

Cogeneration: The simultaneous production of electricity and thermal energy. Cogenerators are considered qualifying facilities under the PURPA and thereby are able to sell their power at avoided cost to investor-owned utilities.

Co-op: Industry jargon for a cooperative electric utility. A co-op is a common form of business organization owned and operated by a group of individuals, businesses, and organizations in similar occupations. Co-ops are located primarily in rural areas and are exempt from federal, state, and local taxes. Most co-ops received their initial funding from the Rural Electrification Administration.

Demand side management (DSM): Entails efforts of utilities to encourage conservation of electricity usage, including demand and consumption patterns. Many of these demand/load management measures have been required, or strongly encouraged, by regulators.

Disco: Industry jargon for distribution facilities or companies engaged primarily in the provision of distribution service.

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53 Sources for these definitions include the Edison Electric Institute, ELCON, Electronic Industries Association, Large Public Policy Council, Missouri Basin Systems Group.

Distribution facilities: Equipment used to deliver electric power at lower voltages from the transmission system to the final user. Although considered a distinct segment of the market, distribution facilities generally can be grouped with transmission facilities because these assets perform a similar function that is wholly distinct from generating facilities.

Divestiture: The process of requiring monopolistic utilities to spin off one segment of their business; this is done to ensure that uncompetitive advantages created by former government actions are removed so that competition can develop. Divestiture, or vertical disaggregation, serves as a viable alternative to open access to de-monopolize the industry.

EEI: The Edison Electric Institute, a national association representing the majority of America's investor-owned utilities. EEI members produce almost 80 percent of all the electricity produced annually.

ELCON: Acronym for the Electricity Consumers Resource Council, the national trade association that represents America's largest industrial and commercial electricity customers. ELCON's members consume roughly 5 percent of all electricity consumed in the United States.

Energy brokers: Companies that act as middlemen in an electronic marketplace in which electric power is priced, purchased, and traded. Energy brokerage works like other commodities that are traded in major markets, such as commodity futures markets.

EPAct: The Energy Power Act of 1992 allowed the FERC to introduce greater elements of competition in electric generation by ordering monopolistic utilities to provide access for a new category of power producers known as exempt wholesale generators, or "EWGs," to any other generation company along the transmission grid. These are exclusively wholesale transactions, however; retail contracts and transactions between independent producers and EWGs are not authorized under the EPAct.

EWGs: Exempt Wholesale Generators were created under the Energy Power Act of 1992 and are exempt from the PUHCA. They sell power exclusively to other power producers in the wholesale market and, therefore, still are not allowed to sell the power they produce directly to electricity customers.

FERC: The Federal Energy Regulatory Commission replaced the Federal Power Commission as the agency responsible for regulating the price, terms, and conditions of transactions in the U.S. wholesale electricity market, and any other electricity issues that are interstate in nature. Intrastate electricity issues and retail electric transactions are regulated primarily by state public utility commissions (PUCs).

FERC orders No. 888 and No. 889: FERC regulations issued in 1996 that implemented the wholesale access and competition required under the Energy Policy Act of 1992. The orders required the unbundling of service components by monopolistic utilities, established a computer-based information sharing system known as OASIS to allow electricity marketers and brokers to conduct transactions more efficiently, and required further actions to identify potentially stranded costs that could arise due to these requirements.

FPA: The Federal Power Act of 1935, which created the FERC's predecessor, the Federal Power Commission, and granted it the power to regulate the interstate electricity transactions that could not be controlled by any single state PUC. The Federal Power Act was passed in conjunction with the PUHCA.

Genco: Industry jargon for generation facilities, or companies that are primarily involved in the generation of electric power.

Generation facilities: The equipment and assets used to convert various forms of energy input into electrical power. Generating facilities are wholly distinct from transmission and distribution facilities and are considered highly competitive in their own right.

Grid: Industry jargon referring to the interconnected power lines that constitute the transmission/distribution networks of the United States.

IPP: An independent power producer; a generating company that produces electric power but does not operate as an integrated utility because it has no transmission or distribution facilities. IPPs proliferated rapidly after the passage of the PURPA because the statute required monopolistic utilities to purchase IPP-producer power. IPPs are also commonly referred to as non-utility generators (NUGs).

IOU: Investor-owned utilities are shareholder-owned, publicly traded corporations that are taxed like other private businesses but regulated strictly by both state and federal officials. IOUs were granted regional monopolies via express government actions that simultaneously protected their service territory from competition while guaranteeing their profits and ensuring them against any market or financial risk. IOUs are collectively represented by the Edison Electric Institute.

kWh: Acronym for kilowatt hour, the most common unit of measure within the electric industry. Consumers are charged in cents per kilowatt hour.

Load: The aggregate amount of power demanded by electricity consumers at any given time and then placed on the grid by generating companies to fulfill that demand.

Muni: Industry jargon for a municipally owned electric utility. Municipalities are electric utilities owned and operated by a municipal government to serve citizens within their geographic boundaries. They typically consist of a generating plant or plants and a short-haul distribution system.

NARUC: The National Association of Regulatory Utility Commissioners represents the collective interests of state and local regulators across America.

Open access: A deregulatory model that requires monopolistic utilities to allow rivals access to the transmission and distribution facilities they possess on non-discriminatory terms at cost-based rates. Many legislators and regulators view open access as the preferred method of de-monopolizing the industry and ensuring greater competition in the electric market.

Power pools/PoolCo: Centralized, independent organizations that would be responsible for purchasing all wholesale electric power in a given service region and then reselling power to final customers. Power pools would act as a short-term spot market where buyers and sellers could conduct electricity transactions. Many regulators ar-

gue PoolCo solutions represent the optimal method of coordinating operations and improving system reliability in the future. PoolCo critics argue the system would interfere with many existing and future contractual obligations and require too much on-going, centralized regulatory oversight.

Power marketer: Any middleman firm that buys and resells power but does not own its own generating or transmission facilities. Power marketers must file with the FERC to conduct business because they resell power across state boundaries.

PMAs: Five Power Marketing Administrations are operated by the Department of Energy. PMAs sell electricity at the wholesale level that is generated by approximately 130 power plants (mostly dams) built and maintained by the Army Corps of Engineers and the Bureau of Reclamation. The five PMAs are Alaska, Bonneville, Southeastern, Southwestern, and Western Area. The Alaska PMA is scheduled to be privatized first.

PUHCA: The Public Utility Holding Company Act of 1935 federalized the regulation of multi-state utility holding companies after they grew beyond the reach of state regulators. The PUHCA requires holding companies that own or control more than 10 percent of another utility to register with the Securities and Exchange Commission (SEC) and provide the agency with detailed records of their financial transactions and holdings. The law restricts merger and acquisition activity, curtails investment in non-utility industries, prohibits intercompany loans, and regulates other financial transactions strictly (such as the issuance of new securities). The statute also constrains and even narrows the powers of these holding companies, allowing them to control utilities essentially only within a given state, which maximizes state control —a primary objective of the act. Finally, the law created a regulatory distinction between "registered" holding companies and "exempt" holding companies. To qualify for an exemption from PUHCA, a holding company must be primarily intrastate in geographic scope and limited in business operations to the provision of a basic utility service. Not surprisingly, this has generally discouraged firms from expanding operations; only 14 "registered" holding companies currently exist in the United States. Over 150 "exempt" holding companies exist that exclusively serve customers within their own states.

PURPA: The Public Utility Regulatory Policies Act of 1978 was passed in the 1970s during the energy crisis to encourage the use of alternative energies and conservation techniques. It designated certain small IPPs as qualifying facilities (QFs) under the law. As a QF, alternative energy producers earned exemptions from existing laws and were able to sell electricity wholesale to utilities. This had the beneficial, albeit unintended, effect of proving competition was feasible within the industry because independent generation proliferated over time.

PUC: The Public Utilities Commission regulates intrastate electricity transactions and retail electric service. Although the various PUCs work independently of the FERC, they still must abide by FERC guidelines as established by various federal statutes. They are also commonly known as Public Service Commissions or PSCs.

QF: Industry jargon for a "qualifying facility" under the PURPA. If an independent power producer is granted QF status from the FERC, it is then allowed to sell its power to IOUs at avoided cost and is exempted from most federal regulations that

evolved from the PUHCA. Qualifying facilities generally produce electricity via co-generation or renewable energy sources, such as solar, wind, or hydro-power.

REA/RUS: The Rural Electrification Administration (now called the Rural Utilities Service or RUS) was created in 1936 to electrify underdeveloped rural areas by providing subsidized loans and grants to rural electric cooperatives.

Regulatory compact: Theory advocated by most regulators and electric utility companies that argues that in exchange for the construction and operation of a monopolistic, regional electrical system, utilities would have their profitability and overall financial viability guaranteed. The theory will be referred to often in the upcoming deregulatory debates; utilities will argue that because they have been guaranteed traditionally a fair return on any investment they made, assets or facilities that become uneconomic or "stranded" due to the rise of competition should be compensated for by competitors or captive ratepayers.

Retail wheeling: Non-utility generating companies that do not own transmission facilities sell the electricity they produce directly to residential, industrial, and commercial consumers. Currently wholesale wheeling is mandated under federal law.

Stranded benefits: Benefits many regulators and environmental groups argue will be lost with the move to competition in electricity: namely, mandated environmental conservation programs or those on the overall network integrity and reliability. Proponents of competition argue such benefits would be augmented in new ways if competition were allowed.

Stranded costs: Assets owned by utilities that supposedly would become uneconomical in a competitive marketplace: for example, non-depreciated generating facilities or pre-established long-term contractual obligations.

Transco: Industry jargon for transmission facilities, or a company engaged almost exclusively in the provision of transmission service.

Transmission facilities: Equipment used to deliver electric power at higher voltages in bulk quantity, from generating facilities to local distribution facilities, for final retail use. Industry officials often include distribution facilities with transmission facilities, however, when discussing transmission services relative to generation services.

Unbundling: The separation of the various components of electricity production, shipment, and service in order to introduce greater elements of competition to these segments of the industry. "Functional unbundling" would require monopolistic utilities to provide access to their transmission and distribution network in exchange for an access fee. "Structural unbundling" would require complete vertical disaggregation such that monopolistic utilities would be required to divest either their generation assets or their transmission/distribution assets.

Wheeling: The transmission of electric power by a utility that does not own or directly use the power it is transmitting.