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SYMPOSIUM: ELECTRICITY RESTRUCTURING AT A CROSSROADS: CONSUMER AND ENVIRONMENTAL IMPLICATIONS

Competition, Environment, and the Electric Industry: A Special Symposium on Restructuring at the Crossroads

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The U.S. electric industry is in the midst of wrenching changes. For well over fifty years, most consumers have relied upon their local investor-owned utility (IOU) for the generation, delivery and sale of electric power. In exchange for a state-conferred franchise and a fair return on invested capital, IOUs have historically submitted to thorough regulation intended to promote the public interest in reliable, affordable, and environmentally sound service. This system arose as a result of economic realities favoring natural monopoly conditions and conscious regulatory policy to both safeguard the IOU from “ruinous competition”¹ and to protect consumers from the adverse effects of monopoly control – higher prices, restricted output, and the transfer of wealth from consumers to the utility.² Publicly owned power systems, serving a significant minority of electricity consumers, have also followed the path of affordable prices based on production costs.

The last several years have seen a major impetus to deregulate as much of the industry as feasible, beginning with electric generation, through a process that has come to be known as electricity “restructuring.” The movement for electricity restructuring

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1. *Idaho Power & Light Co. v. Blomquist*, 141 P. 1083 (Idaho 1914).

2. *See Munn v. Illinois*, 94 U.S. 113 (1877).

has drawn its strength from three major sources. First, significant rate disparities arose as a result of investment by some utilities in nuclear and other capital-intensive generation capacity. Industrial customers – or, more particularly, trade associations representing large industrial energy users – pressed for regulatory reforms that would allow greater access to lower priced electricity. Second, advances in generation technology, falling natural gas prices, and federal policy changes have given rise to the development of an independent power industry capable of producing electricity more efficiently and economically than many older-vintage utility plants. Third, the country's prevailing economic and political climate has favored deregulation wherever possible. In this context, the push to deregulate electricity was bolstered by the earlier experience in natural gas and airline deregulation.

In recent years, the Federal Energy Regulatory Commission (FERC), which has jurisdiction over interstate generation and transmission, has been a driving force behind electricity restructuring. FERC has instituted several measures to create competitive bulk power markets, such as requiring that owners of transmission lines wheel power for any supplier, whether or not an affiliated company.³ FERC has fostered the formation of wholesale electric energy markets managed by state or regional independent system operators (ISOs).⁴ This has permitted market-based pricing of interstate power sales, where formerly such sales were all priced based on production costs. But the main thrust to deregulate generation pricing has come from the states, which historically have had the authority to regulate their intrastate electricity industries. By late 2000, twenty-four states, including most of the larger states, had decided to deregulate electricity generation.⁵

But recent developments in the states furthest along with restructuring have given pause. Unregulated generation prices are higher than hoped, in some cases dramatically higher, and rela-

3. See FED. ENERGY REGULATORY COMM'N, Docket Nos. RM95-8-000 and RM94-7-001, Order No. 888, PROMOTING WHOLESALE COMPETITION THROUGH OPEN ACCESS NON-DISCRIMINATORY TRANSMISSION SERVICES BY PUBLIC UTILS.: RECOVERY OF STRANDED COSTS BY PUB. UTILS. AND TRANSMITTING UTILS. (May 29, 1996), available at <http://www.ferc.fed.us/news1/rules/pages/environmental.pdf>.

4. See 18 C.F.R. pt. 35 (1999).

5. See Energy Information Administration, *The Status of Electricity Industry Restructuring Activity as of April 2001: Retail Access, Public Benefits, Stranded Cost Efforts*, http://www.eia.doe.gov/cneaf/electricity/chg_str/tab5rev.html (last modified April 5, 2001) (Retail Access, Public Benefits, and Stranded Cost Efforts).

tively few consumers have actually chosen non-utility power suppliers.⁶ Likewise, there is growing concern that the potential environmental benefits of restructuring may never materialize. The result is a hiatus in the momentum for restructuring. At this critical juncture, the need is to understand what has happened, and where to go from here.

In November 2000, the Pace Environmental Law Review,⁷ the Pace Law School Energy Project,⁸ and the Tellus Institute⁹ jointly sponsored "Electric Industry Restructuring at a Crossroads: Consumer and Environmental Implications." The premise of the Symposium was that the electric industry is at a critical juncture. Policy makers must decide whether today's dysfunctional wholesale markets and associated social costs are temporary and aberrational and thus stay the regulatory course; or alternatively, that the problems being experienced reflect that electricity supply has inherent infrastructural and oligopolistic dimensions.

The shift from regulation to markets raises a host of legal and policy issues. What are the prerequisites for competitive generation markets, and how can these prerequisites be secured through state and federal energy policy? Are there market failures that harm economic growth, human health, and the environment, and warrant continued regulatory intervention? Can environmental policies be designed to support the efficient operation of markets, technological innovation, and expanded choice? If so, are these policies most effectively implemented at the state or federal levels?

Making Markets Work: Electricity deregulation has had the same goals as deregulation of other industries, such as the airlines and long-distance telecommunications: to allow competitive

6. California regulators have proposed a surcharge of three cents per kilowatt-hour to be added to rates charged by the economically troubled Pacific Gas and Electric Company, and Southern California Edison Company. This surcharge will translate into rate increases of over forty percent. See CAL. PUB. UTIL. COMM'N, INTERIM OPINION REGARDING PROPOSED RATE INCREASES, Application 00-11-038 (Mar. 26, 2001), available at http://www.cpuc.ca.gov/PUBLISHED/AGENDA_DECISION/5953.htm. The state has also directly intervened in California electricity markets by entering into long-term contracts with generating companies on behalf of the state's investor owned utilities, as has the Department of Energy by directing generators to sell to the cash-strapped utilities.

7. See generally Pace University School of Law, *Pace Environmental Law Review*, at <http://www.pace.edu/lawschool/pacelaw/pelr>.

8. See generally Pace University School of Law, *Pace Law School Energy Project*, at <http://www.pace.edu/lawschool/env/energy>.

9. See generally Tellus Institute, at <http://www.tellus.org>.

markets to create economic efficiency. The widespread expectation has been that competition in the electric industry will create consumer choices and result in lower prices than under cost-of-service regulation. Unexpected price increases in California, New York, and elsewhere are creating huge uncertainty about the impact of electric industry restructuring on consumer interests. State regulators are wondering whether they may have ceded to the federal government and newly-minted ISOs much of their ability to protect people and businesses from the harsher aspects of competition.¹⁰

Others still see the early experiments in restructuring as *too* timid, insofar as vestiges of consumer/environmental protectionism have compromised the full benefits of unfettered competition. According to this viewpoint, several dozen new generating facilities in the pipeline are a panacea,¹¹ bringing supply and demand back in balance, and imposing needed discipline on existing market participants.

Accordingly, the central question addressed at the symposium was: Can markets yet be made to work? What are the possibilities of competitive electric markets? Are there limits to the relevance and efficacy of markets in delivery of electric energy services? Several major sub-issues and themes were explored at the symposium, including:

- *Institutional Issues – The Respective Roles of State Commissions, FERC, and the ISO:* At the same time the U.S. Supreme Court is devolving authority back to the states under new principles of federalism, the states are finding themselves unable to cope with the numerous energy issues that transcend political borders. Trans-boundary air pollution, the formation of regional (and even international) markets for energy, the creation of huge power giants through utility mergers and acquisitions, and the evolution towards regionalization of the transmission system all present problems not easily accommodated by state and federal regulators acting within their own jurisdictional spheres. The limitations of the current regulatory patchwork have been made manifest with recent electricity price spikes. FERC and the regional ISOs all appear

10. See Letter from Michael Kahn & Loretta Lynch, to Gray Davis, Governor, California (Aug. 2, 2000) (report on California's electricity options and challenges) available at http://www.cpuc.ca.gov/published/report/Transmittal_Letter.htm.

11. See, e.g., NEW YORK INDEP. SYSTEM OPERATOR, POWER ALERT: NEW YORK'S ENERGY CROSSROADS 4 (Mar. 2001) (recommending the addition of 8,600 MW of new capacity in New York State by 2005).

unable to independently identify and cope with instances of potential market power abuse.¹² These sessions explored these developments and the extent to which they may call for new regulatory structures and policies.

- *Recognizing Market Power*: What is market power and how can it be recognized? What are its consequences? What are the preconditions for competitive generation markets? How do generation capacity and transmission capacity affect market power? How competitive are markets to date a) at the wholesale level, and b) at the retail level?
- *Policy Options for Dealing with Wholesale Market Failure*: What are the advantages and disadvantages of a range of responses to chaotic market conditions? Measures considered include the imposition of wholesale price caps, alternative auction schemes, aggressive demand reduction and price responsive load bidding, and expedited power plant siting and review.

Environmental Stewardship: Restructuring is driven by economic objectives, not environmental concerns. Nonetheless, restructuring has direct implications for a range of policy mechanisms that were developed in the cost-of-service regulatory environment to reduce the tremendous environmental footprint of the electric industry. Mechanisms like integrated resource planning,¹³ explicit accounting of environmental externalities,¹⁴ utility investment in energy efficiency measures,¹⁵ and incentive regula-

12. See, e.g., Jeff Gerth & Joseph Kahn, *Critics Say U.S. Energy Agency is Weak in Oversight of Utilities*, N.Y. TIMES, Mar. 23, 2001, at A1.

13. Integrated resource planning refers to a process of identifying a mix of supply-side (i.e. new generation) and demand-side (i.e. conservation) energy options that meets anticipated needs at the lowest economic and social cost. See Ralph Cavanagh, *Least-Cost Planning Imperatives for Electric Utilities and Their Regulators*, 10 HAR. ENVTL. L. REV. 299 (1986).

14. Environmental externalities represent the environmental and other social costs of electric power production, delivery and consumption that are not reflected in the price of electricity. See RICHARD OTTINGER ET AL., ENVTL. COSTS OF ELECTRICITY (1990). A number of states instituted policies in the 1980s and 1990s to explicitly account for these costs in resource decisions. See, e.g., N.J. ADMIN. CODE tit. 14 § 12-3.8 (1996) (externality value of \$.02 per kilowatt-hour for electric utility demand-side management programs).

15. See STEVEN NADEL ET AL., AM. COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY, DSM UNDER ATTACK: ARE UTILITIES OVERREACTING TO THE THREAT OF RETAIL WHEELING? (1995). In New York, for example, utility expenditures on demand-side management programs fell precipitously from peak level spending in 1992 of \$286.3 million to under \$95 million by 1996.

tion¹⁶ have been deemed incompatible with the prevailing industry structure.¹⁷ Some restructuring states have recast some of these mechanisms as new policies, but others have not. These include public benefits funds for delivery of energy efficiency programs, renewable energy development, low income initiatives, etc.,¹⁸ or renewable resource generation requirements to be met by all power suppliers.¹⁹ Moreover, competition opens new markets for older, fully depreciated coal-fired power plants that are generally subject to less stringent air quality controls.²⁰ Finally, there is concern that retail energy suppliers will compete almost exclusively on the basis of price, and will not typically offer consumers energy efficiency and other "value-added" services.

On the other hand, some see the unleashing of market forces as furthering environmental goals. The discipline of the market place will force the shut down of inefficient plants. Consumers will, for the first time, be empowered to choose electric companies on the basis of their environmental record, in turn sending signals to the market to build more high-value clean and renewable energy facilities.²¹

Though driven by indications that the economic premises of restructuring may be flawed, the pause in the momentum away from regulation underscores the complexity facing environmental

16. See DAVID NICHOLS, TELLUS INSTITUTE, REGULATORY INCENTIVES FOR DEMAND-SIDE MANAGEMENT (1999), available at <http://www.tellus.org/energy/publications/98211rpt.pdf>.

17. See CAL. PUB. UTIL. COMM'N, CALIFORNIA'S ELECTRIC SERVICES INDUSTRY: PERSPECTIVES ON THE PAST, STRATEGIES FOR THE FUTURE 94 (1993). "Years of fine tuning a sophisticated least-cost procurement process that attempts to predict 'what the utility would do' further leaves the state with what many view as a lengthy, intrusive, and complex regulatory approach that no longer seems to mesh with a rapidly changing market for electric services." *Id.*

18. See MARTIN KUSHLER & PATTI WITTE, AM. COUNCIL FOR AN ENERGY EFFICIENT ECONOMY, REVIEW AND EARLY ASSESSMENT OF PUBLIC BENEFIT POLICIES UNDER RESTRUCTURING (2000).

19. See, e.g., CONN. GEN. STAT. § 16-245a (1998); N.J. STAT. ANN. § c.48:3-49 (West 1999).

20. See BRUCE BIEWALD ET AL., NAT'L ASS'N OF REGULATORY UTIL. COMM'RS, GRANDFATHERING AND ENVIRONMENTAL COMPARABILITY: AN ECONOMIC ANALYSIS OF AIR EMISSIONS REGULATIONS AND ELECTRIC MARKET DISTORTIONS (Jan. 28, 1998) available at <http://www.synapse-energy.com/publication.htm>; See David Wooley, *Environmental Comparability*, 12 J. NAT. RESOURCES. & ENV'T 276, 279 (1998).

21. See BRUCE BIEWALD, NAT'L ASS'N OF REGULATORY UTIL. COMM'RS, PROMOTING ENVTL. QUALITY IN A RESTRUCTURED ELECTRIC INDUSTRY (1995); See Richard F. Hirsh & Adam H. Serchuk, *Power Switch: Will the Restructured Electric Utility System Help the Environment?*, 47 ENV'T 4, 6 (Sept. 1999), available at <http://www.majbill.vt.edu/history/hirsh/EnviroArticleAsPublished.htm>.

stakeholders who now need to understand three differing sets of challenges:

- how to assure that environmental objectives are effectively incorporated in the structure of deregulated markets;
- how to assure appropriate environmental protection mechanisms in jurisdictions retaining full regulation of electricity; and
- whether or not, and under what conditions, to support further restructuring.

The symposium's discussion served to highlight the major environmental risks introduced by restructuring. Presenters addressed such issues as the effectiveness of market compatible policies to protect the environment, whether certain existing environmental and utility regulatory policies themselves represent barriers to the introduction of clean energy technologies, and what additional actions need to be taken to harmonize environmental and economic objectives.

- *Addressing Environmental Values in Resource Planning and Acquisition:* Should power plant development and issues of "need" be left to market participants? Do current state siting processes allow adequate consideration of such issues as fuel diversity, natural gas and electric transmission capacity, environmental justice and cumulative environmental effects?
- *Eliminating Environmental Regulatory Barriers:* The participants explored the economic and environmental effects of uneven environmental regulation and the legal theories behind the recent federal and state lawsuits against Midwestern power plants under the Clean Air Act to force these plants to meet modern pollution control requirements.
- *Barriers to Distributed Generation and Combined Heat and Power Systems:* Owing to superior environmental, reliability, technical efficiency, and power quality characteristics, many electric industry participants see small scale, decentralized power systems as the wave of the future. Despite their promise, these technologies will be consigned to niche markets without significant revision to public policies intended primarily to address central station utility power plants. The panel explored the prospects for distributed technologies, and the policy issues most critical to the commercial viability of these technologies.
- *The Role of Regulation in Promoting Technological Innovation:* Is there a continuing role for publicly supported, competi-

tively neutral research and development in a restructured electric industry? If so, what is the best delivery mechanism? What is the best administrative regime?

In the months following the symposium, the issues it addressed moved quickly into the sphere of public discussion and debate, fueled most strikingly by the experience in California: distribution utilities verging on bankruptcy, power supplies so short that rolling blackouts were imposed at times of high demand, the state itself entering the market as an interim buyer of wholesale power, large retail rate increases, and no overall resolution of the crisis in view. Underlying tensions based on apparent admixtures of ideology and expertise sharpened, as some attributed the California crisis solely to deregulation, and others to everything but deregulation. In the latter vein, blame has been placed on insufficient generating capacity, too much air quality regulation, a cumbersome process for building new electricity supplies, or the need for new fossil energy resources. But careful scholarly analysis of market behavior has shown that the major factor increasing power costs in California, at least through 2000, is generator market power, enabled by the new wholesale market structure.²² This finding is echoed in other analyses.²³

It was always envisioned that there would be a "transitional period" in the move toward restructuring. It is now evident that the "transition" is a rather unstable state. The nature of the crossroads becomes clear. Much fundamental work must be done to create workably competitive electric market structures. Or, much fundamental work must be done to recreate reasonably regulated electricity markets.

22. See PAUL JOSKOW & EDWARD KAHN, AEI-BROOKINGS JOINT CENTER FOR REGULATORY STUDIES, A QUANTITATIVE ANALYSIS OF PRICING BEHAVIOR IN CALIFORNIA'S WHOLESALE ELECTRICITY MARKET DURING SUMMER 2000 (Jan. 15, 2001), available at http://www.aei.brookings.org/publications/working/working_01_01.pdf.

23. See, e.g., RICHARD ROSEN ET AL., TELLUS INST., CAN ELECTRIC RESTRUCTURING MEET THE CHALLENGES IT HAS CREATED? (Nov. 2000), available at <http://www.tellus.org/energy/publications/restructchallenge.pdf>.